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GIVEN BEFORE THE
INDIAN COAL COMMITTEE

1924-25

VOLUME III



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A.—Questionnaires.

(i) QUESTIONNAIRE FOR THE EASTERN BENGAL RAILWAY.

1. What are the arrangements under which coal traffic to the docks is carried over the Eastern Bengal Railway?
 2. Please state the average time taken by trains carrying coal from Naihati to the docks and by trains bringing back empties from the docks.
 3. Are there any special difficulties which interfere with the quick transit of goods-trains between Naihati and the docks and *vice versa*?
 4. Are there any special difficulties which militate against the prompt turnaround of engines and rolling-stock between Naihati and Bandel?
 5. Have you any suggestions to make for quickening up the movement of stock between Naihati and the docks so far as your system is concerned?
-

(ii) QUESTIONNAIRE FOR THE EAST INDIAN AND BENGAL NAGPUR RAILWAYS.

1. Please describe the organisation of your staff for dealing with coal traffic.
2. Please furnish a comparative statement showing the total amount of coal transported by your Railway for each calendar year since 1912. The totals for the first and second six months of each year and also for up-country and down-country traffic should be shown separately.
3. Please furnish a comparative statement showing the number of wagons supplied to the coalfields for each calendar year since 1912. The totals for the first and second six months of each year and also for up-country and down-country traffic should be shown separately.
4. Please furnish statements similar to those asked for in Questions 2 and 3 for traffic other than coal.
5. On what principle do you distribute the total number of empty wagons available each day between coal and traffic other than coal?
6. To what extent has the efficiency of the wagon supply to the coalfields been increased by (a) additions to wagon stock; (b) pooling of wagons and (c) additional facilities for enabling stock to be turned round more quickly?
7. What is the average turnaround of coal wagons between the coalfields and the docks? What is the average time taken (a) from the colliery siding to dock junction or Bengal Nagpur Railway Port Trust exchange sidings, (b) from dock junction or exchange sidings back to dock junction or exchange sidings and (c) from dock junction or exchange sidings to Ondal or Adra. How do you arrive at these average figures and how do they compare with the figures of 1912?
8. Please describe the manner in which indents are submitted and wagons are allotted to the different collieries.
9. On what principle is over-indenting permitted and to what extent is it done?
10. Please furnish a statement for each of the calendar years since 1912 showing for the first and second halves of each year (a) the total number of wagons indented for and (b) the total number supplied on indent. Please give figures of indents from the Chief Mining Engineer for Railway Loco Coal separately, including East Indian Railway and Bengal Nagpur Railway market coal.
11. What is the total number of wagons which can be (a) supplied to and (b) despatched from the coalfields daily without congestion? Please explain

how you arrive at these figures. How many of these are required for collieries owned by railways? Please give corresponding figures for each year since 1912.

12. What is the maximum amount of export and bunker coal that you can handle in present conditions between the coalfields and the Kidderpore docks, Howrah and Shalimar? Do you anticipate any increase in your maximum capacity in the near future?

13. Please describe the different methods of distributing empty wagons to colliery sidings and of drawing out loaded wagons from the sidings.

14. Please describe the manner in which loaded coal wagons are weighed, invoiced, marshalled and despatched.

15. In what yards in the coalfields is the gravity system of marshalling in use and what yards are provided with automatic weigh-bridges?

16. Who is responsible for the proper maintenance of the weigh-bridges and how often are they tested?

17. Please state to what extent depôt yards have been improved in recent years and also what improvements are at present in progress or are contemplated.

18. Please describe in detail the "10-hour" system and state on what sections it is in force. What are the reasons which militate against its extension to all sections?

19. What in your opinion are the causes of over-loading at the collieries? What are the penalties levied by the railways for over-loading? On how many wagons have these penalties been levied during each of the last three calendar years and what has been the total amount of penalty levied in each year?

20. What percentage does the number of over-loaded wagons on which penalty was levied bear to the total number of wagons despatched from the collieries?

21. Have all wagons supplied to the collieries a load-line based on a specific gravity of 42 cubic feet? In view of the varying specific gravities of different coals, do you consider such a load line can be relied on to prevent over-loading?

22. Would it be preferable if each colliery, in view of its special knowledge of the specific gravity of the coal it is raising, marked its own load-line in chalk on the wagon before it commenced loading?

23. On what scale is demurrage levied at the collieries for the detention of wagons?

24. On how many wagons have demurrage charges been collected during the last three calendar years and what has been the total amount collected in each year? What percentage does the number of wagons on which demurrage charges were collected bear to the total number of wagons despatched from the collieries?

25. What check is kept on (a) the supply of empty wagons to collieries, (b) the clearance of loaded wagons from collieries, (c) the marshalling despatch and transit of loaded coal wagons to the docks and (d) the despatch and transit of empty wagons from the docks to the coalfields, in order to avoid delays?

26. To what extent do collieries assist the Railways in regard to (a) the fixing of the door pins of wagons after loading, (b) loading covered wagons for up-country as far as possible and (c) loading wagons to the same destination in groups as far as possible?

27. Can you give an approximate estimate of the proportion of open and covered wagons supplied to the coalfields?

28. Are there insuperable obstacles to the supply of open wagons to collieries loading coal for the docks, collieries using mechanical loading appliances and collieries loading coal for consumers who have installed mechanical unloading appliances?

29. Would it be possible to give a double supply of wagons to collieries which have installed mechanical loading appliances in order to ensure full use of the plant?

30. It has been suggested that wagons should be distributed to colliery sidings as received and stabled there ready for loading instead of in the marshalling yards. Please state your views on this suggestion.

31. Is there any objection to splitting up rakes and half rakes among a large number of collieries provided they are on the same pilot section, other than the fact that the work of supplying wagons to a large number of collieries and collecting them when loaded would tend to congest the pilot section and increase the cost for working?

32. What is your objection to the issue of more than one railway receipt in the case of rakes and half rakes loaded to one consignee at one destination so as to enable the consignee to hand over a separate railway receipt of each of his customers in return for payment for the coal?

33. What is your objection to the abolition of the present system of pre-payment of freight on coal and reversion to the previous system of booking coal "To pay"?

34. What are the principles adopted and the procedure followed in dealing with applications for sidings?

35. Please give the total number of colliery sidings under the following heads:—

- (a) assorted sidings,
- (b) railway sidings, and
- (c) private sidings.

Please give the total mileage for each class of sidings.

36. Please state the circumstances in which sidings of the three classes are provided.

37. Would you be in favour of a preferential wagon supply for export and bunker coal for the Kidderpore docks?

38. Do you consider that this might be subject to measures being taken to prevent collieries over-indenting for wagons for such coal?

39. If collieries loading export and bunker coal for the Kidderpore docks were given a preferential wagon supply, would it be possible to treat this supply as cumulative, i.e., to adjust subsequently the number of wagons supplied to a colliery over and above what it would have received under the ordinary allotment?

40. Please give your views as to the value to your railway of the work of the Coal Transportation Officer?

41. Are you in favour of the continuance of the appointment with or without any modification of the present arrangement?

42. What objections, if any, would there be to goods-trains carrying export and bunker coal for the Kidderpore docks taking preference over other goods-trains *en route*?

43. Do you consider the notice given by the Port Commissioners of the opening of steamer berths sufficient? If not, how many days' notice do you consider should be given?

44. Are you in favour of mechanical unloading appliances at the docks: (a) to suit all types of wagons, (b) to suit all types of open wagons and (c) to suit only one type of wagon?

45. Would not a mechanical unloading appliance which could only deal with a special type of wagon reduce the capacity in the coalfield, as it would entail extra work in sorting out and supplying the wagons of a special type to the collieries?

46. Have you inspected the mechanical unloading appliance used by the Calcutta Electric Supply Corporation at their Cossipore Power House? If so, how far do you consider this could be adapted for use at the Kidderpore docks?

47. What is the system in force in regard to the recovery of demurrage from the Port Commissioners on wagons detained at the docks?

48. On how many wagons have demurrage charges been collected from the Port Commissioners during each of the last three calendar years and what has been the total amount collected in each year? What percentage does the number of wagons on which demurrage charges were collected bear to the total number of wagons received? If there has been any change in the demurrage system, please show the figures for the period prior to the change separately from those subsequent to it.

49. Please furnish a statement showing the charges levied by your railway on coal for export and bunkering for each calendar year since 1912, showing separately the terminals levied in the coalfields, the railway freight and the terminals levied in Calcutta.

50. Please furnish a similar statement for (a) coal booked by the all-rail route to Indian ports other than Calcutta and (b) coal booked from Indian ports other than Calcutta inland.

51. How is coal classified for purposes of charging rates as compared with other commodities?

52. Please give detailed reasons for the variations from time to time in the charges on export and bunker coal and explain the basis on which the charges at present in force have been fixed.

53. Can you give the inclusive cost of running a train loaded with coal from say Asansol to Kidderpore docks as compared with the freight charged for carriage?

54. Please state your views in regard to the possibility of reducing all or any of the charges at present levied on coal or of increasing the rebate at present granted on export coal. If you consider that no reduction in rates or no increase in rebate is possible, please give detailed reasons for your view.

55. It has been suggested that a flat rate of railway freight should be quoted from all stations in the coalfields to the Kidderpore docks and to the Howrah and Shalimar depôts instead of different rates from different points in the coalfields as at present. Please state your views in regard to this.

56. What are your views on the suggestion which has been made that reduced rates should be charged for coal during the second six months of each year, or any shorter period, when there is a smaller demand of wagons, and an incentive to coal consumers to lay up stocks of coal, in order to reduce the pressure on the wagon supply during the busy season?

57. Please state the rates and terminals charged for the carriage of loco coal for foreign railways. If these are lower than those charged for the carriage of coal for the public, please explain the reason for the difference.

58. Is the present terminal charge which is recovered in Calcutta from the public retained by the Railway or is the whole or any part of it handed over to the Port Commissioners?

59. Does the railway pay any terminal charge to the Port Commissioners in addition to that levied from the public?

60. Do you consider that the rebate of 25 per cent. of the freight per ton now granted on export coal has had any effect in stimulating the export coal trade?

61. What is the procedure which has to be followed in submitting applications for rebates and in checking and granting them? What is the average time taken in granting them?

62. What advantage does the grant of a rebate possess over the grant of a concessional rate of railway freight on export coal?

63. Are there any instances in which railway administrations in India have granted special rates for export traffic for commodities other than coal? If so please give details of the freight charged and the average lead in each case.

64. Please state the position of your railway in regard to the coal depôts at Howrah and Shalimar.

65. Please furnish a statement showing the rent charged for the use of coal depôts since 1912, explaining any variation in the charges and the basis on which the present rents have been fixed.

66. What suggestions have you to make in regard to preventing pilferage of coal from wagons running trains or standing in yards?

67. Have you any suggestions to make other than those contained in your replies to the previous questions (a) in regard to speeding up the transport of coal and (b) in regard to stimulating the export trade in coal generally.

68. If your answers to the above questions do not apply in their entirety to coke as well as to coal please state exactly in what respect they require alteration.

SPECIAL QUESTIONS FOR THE EAST INDIAN RAILWAY.

69. Are there any special difficulties which interfere with the quick transit of goods trains between Naihati and the docks and *vice versa*?

70. Are there any special difficulties which militate against the prompt turn-round of engines and rolling stock between Naihati and Bandel?

SPECIAL QUESTION FOR THE BENGAL NAGPUR RAILWAY.

71. What is the maximum number of wagons which you are in a position to make over daily to the Madras and Southern Mahratta Railway at Waltaire? How is the number apportioned between coal and commodities other than coal? What are the factors which prevent your making over a larger number of wagons daily? Is there any likelihood of an improvement in this respect in the near future?

(iii) QUESTIONNAIRE FOR THE G. I. P. RAILWAY.

1. Please furnish a comparative statement showing the total amount of coal traffic transported by your railway for each calendar year since 1912,

- (a) from coalfields on the East Indian and the Bengal Nagpur Railway systems separately;
- (b) from the coalfields on your own system;
- (c) from the coalfields on H. E. H. the Nizam's Guaranteed State Railway; and
- (d) from Bombay up-country.

Under head (d) please state the principal places to which the coal is despatched.

2. Please furnish a comparative statement showing the number of wagons indented for and supplied to the collieries located on your system for each calendar year since 1912. The totals for the first and second six months of each year should be shown separately. Please also show separately the number of wagons loaded with public coal and railway loco coal.

3. Is there any over-loading of wagons at the collieries situated on your system and, if so, are any penalties levied for it?

4. Is the load-line for coal marked on your covered wagons based on a specific gravity of 42 cubic feet? Are all your covered wagons marked with this load-line? In view of the varying specific gravities of different coals do you consider that such a load-line can be relied on to prevent over-loading?

5. It is understood that a load-line is not marked in your open wagons as they cannot be over-loaded: can such wagons be loaded flush with the top?

6. Would it be preferable if each colliery, in view of its special knowledge of the specific gravity of the coal it raises, marked its own load-line in chalk on the wagon before it commenced loading?

7. (a) Is the freight prepayment system for coal in force in your railway? If so, would you object to its abolition and to reversion to the previous system of booking coal "To pay"?

(b) Would the abolition of the prepayment system for coal on other railways where it is in force give rise to any difficulties with regard to coal taken over by you from them?

8. Do you recover demurrage from the Bombay Port Commissioners for wagons detained at the docks? If so, on what scale?

9. Please furnish a statement showing the charges per ton per mile actually received by your railway for each calendar year since 1912 on coal from collieries on your own system to (1) Bombay, (2) Ahmadabad, showing separately the terminals levied in the coalfields, the railway freight, the ghat-charges, and the terminals levied at destination.

10. Please furnish a similar statement for coal from the Jharia and Raniganj coalfields (a) *via* Jubulpore and (b) *via* Nagpur.

11. Please furnish a similar statement for coal booked from Bombay up-country.

12. Please give detailed reasons for the variations from time to time in the charges levied on coal and explain the basis on which the charges at present in force have been fixed.

13. Have you any criticism to offer on the present scale of rates for the transport of coal from the Bengal coalfields to Bombay in view of the fact that your railway participates only in the reduced scale applicable to distances of over four hundred miles?

14. Please state your views in regard to the possibility of reducing all or any of the charges at present levied on coal. If you consider that no reduction in rates is possible, please give detailed reasons for your view.

15. It has been suggested that coal sent to Bombay by the all-rail route from the Bengal coalfields should be given a rebate of Rs. 2-6 a ton in order to enable it to compete successfully with South African coal in the Bombay market: please give your views on this suggestion.

16. Please state the rates and terminals charged for the carriage of loco coal: if these are lower than those for the carriage of coal for the public, please explain the reasons for the difference.

17. Please state the justification for levying terminal charges and the nature of the services rendered in return for them.

18. Have you any coal depots in Bombay in which coal is stacked, to be carted away by the consignees as required? If so what rental is levied for the use of them?

19. What suggestions have you to make in regard to preventing the pilfering of coal from wagons on running trains or while standing in yards?

20. Have you any general suggestions to make in regard to speeding up the transport of coal?

21. Please give figure of your own consumption of (1) coal and (2) oil fuel since 1912.

22. How far will the scheme for electrification of part of your system affect your consumption of coal?

(iv) QUESTIONNAIRE FOR THE PORT COMMISSIONERS, CALCUTTA.

1. Please furnish a comparative statement showing the total amount of (a) shipment and (b) bunker coal handled at the docks for each year since 1912; the totals for the first and second six months of each year should be shown separately.

2. Please furnish a comparative statement showing the total number of wagons loaded with (a) shipment and (b) bunker coal received at the docks for

each year since 1912, giving separately figures for the first and second six months of each year.

3. Please furnish statements similar to those asked for in questions 1 and 2 for commodities other than coal.

4. Please describe the manner in which loaded coal wagons are taken over from the Railways and sorted out for the coal berths.

5. What check do you keep on (a) the prompt placing of loaded coal wagons at the berths and the prompt removal of empty wagons from them; and (b) the prompt turnround of coal wagons at the docks generally?

6. What is the average turnround of all wagons at the docks? How do you arrive at this average figure?

7. Do you consider that the lay-out of the sidings at the docks could be improved and, if so, in what directions and to what extent? If not, please give detailed reasons in support of your views.

8. Do you consider that the provision of turn-tables or traversers at the coal berth sidings would facilitate the removal of unloaded coal wagons?

9. What is the present system under which the Port Commissioners pay demurrage on wagons to the forwarding railways? On how many wagons have demurrage charges been levied during each of the last three years and what has been the total amount levied in each year?

10. What percentage does the number of wagons on which demurrage charges were levied bear to the total number of wagons received? If there has been any change in the demurrage system, please give the figures for the period prior to the change separately from those for the period subsequent to it.

11. How many coal loading berths are there? How many of these are fitted with mechanical appliances? Please give a description of the appliances and state their cost (a) when they were purchased and (b) at present day prices.

12. From the point of view of the Port Commissioners what is the most suitable type of wagon for handling coal at the docks?

13. What are your views in regard to the provision of additional mechanical loading appliances (a) to suit all types of wagon, (b) to suit all types of open wagons and (c) to suit only one type of wagon?

14. What type of mechanical loading appliances for coal do you consider most suitable, with special reference to considerations of cost?

15. It has been stated that the height from which coal is dropped into the ship's hold is excessive and the result is considerable breakage. Could matters be improved in this respect: (a) in the case of loading by cooly labour, by the provision of shoots; and (b) in the case of loading by the Beckett plant, by ensuring that the tub is lowered to the fullest possible extent?

16. Are you acquainted with the mechanical wagon-unloading appliances used by the Calcutta Electric Supply Corporation at their Cossipore Power House? Do you consider that this type could be adapted for use at the Kidderpore docks?

17. Please furnish a statement showing separately the various charges levied by the Port Commissioners since 1912: (a) on coal, and (b) on other commodities, received at the docks.

18. Please give detailed reasons for the variations in the charges on coal from time to time and explain the basis on which the charges at present in force been fixed.

19. Please state the total revenue derived by the Port Commissioners (a) from the charges on coal and (b) from the charges on other commodities, for each calendar year since 1912.

20. In addition to the charges mentioned in question 17 is any Calcutta terminal levied from the forwarding Railways and, if so, what is its amount?

21. Please state your views in regard to the possibility of reducing all or any of the present charges levied by the Port Commissioners on export and bunker coal handled at the docks?

22. Please give your views on the suggestion that river dues should be charged to the steamer instead of to the shipper.

23. Please state your views in regard to the possibility of securing a reduction in the charges if the labour supply at the docks were controlled by the Port Commissioners themselves instead of being handed over to a firm of contractors. Would an alteration of the present system, if any, adversely affect the efficiency of the labour supply?

24. What notice is given by the Port Commissioners to the Railways of the opening of steamer-berths? What principle is followed in fixing the period of notice and on what information is it based? Are the results generally satisfactory or otherwise?

25. For what tonnage of coal is dumping accommodation available at the docks? On what principle is it allotted?

26. What are your objections to dumping? What measures do you consider should be taken to avoid the necessity for it?

27. Please state precisely the nature of the Port Commissioners' connection with the coal depots of Howrah and Shalimar.

28. Please furnish a statement showing the rents charged for the use of coal depots since 1912, explaining any variations in the charges and the basis on which the present rates have been fixed.

29. Please furnish a statement showing separately the various charges other than rent for the use of depots levied by the Port Commissioners since 1912 on bunker coal loaded from the depots. Please give detailed reasons for the variations from time to time, explaining the basis on which the rate of charges at present in force have been fixed.

30. Please state your views in regard to the possibility of reducing all or any of the present charges levied by the Port Commissioners on bunker coal loaded from the depots.

31. Have you any suggestions to make other than those contained in your reply to the previous questions (a) in regard to the speeding up of the handling of coal at the docks and (b) in regard to stimulating the export trade in coal generally?

32. If your answers to the above questions do not apply in their entirety to coke as well as to coal, please state in what respects they require alteration.

सत्यमेव जयते

(F) QUESTIONNAIRE FOR THE PORT TRUSTS, BOMBAY AND KARACHI.

1. Please furnish a comparative statement showing the total imports of coal into the port—

(a) by sea; and

(b) by rail;

for each year since 1912. For coal imported by sea please give the figures separately for each country of origin. The figures of bunker coal should also be shown separately.

2. Please give a full description of the methods of—

(a) (Bombay only)

unloading coal from ships (a) discharging into lighters, (b) transporting to bunders, (c) unloading at bunders and stacking and (d) transporting from bunders to ultimate destination;

(b) (Karachi only)

discharging, landing, stacking and disposing of seaborne coal.

3. Are there any schemes in contemplation for improving the facilities for unloading coal such as the provision of mechanical unloading appliances or the extension of the existing ones?

4. Please furnish a statement showing separately the various charges levied by the Port Commissioners, since 1912,

(a) on coal, and

(b) on other bulk cargoes.

5. Please give detailed reasons for the variations, if any, from time to time in these charges, and explain the basis on which the charges at present in force have been fixed.

6. Please give a detailed list of the charges, other than those levied by the Port Commissioners which would be incurred for transport of coal from ship to Railway dépôt or for local consumption.

7. Please state your views in regard to the possibility of reducing all or any of the present charges levied by the Port Commissioners on coal handled at the docks.

8. Please state whether the labour supply for handling coal is controlled by the Port Commissioners or by contractors. If the former, has control by the Port Commissioners rendered a reduction in the charges on coal possible?

9. Do you consider that any alteration in your present system would adversely affect the efficiency of the labour supply?

10. For what tonnage of coal is stacking accommodation available in your port? On what principle is it allotted and what charges are levied for it? Have there been any variations in these charges since 1912? If so, please give reasons for these and explain the basis on which the charges at present in force have been fixed.

11. If your answers to the above questions do not apply in their entirety to coke as well as coal, please state in what respects they require alteration.

12. Please furnish a statement showing for each year since 1920—

(a) the imports of liquid fuel;

(b) liquid fuel bunkers supplied to steamers;

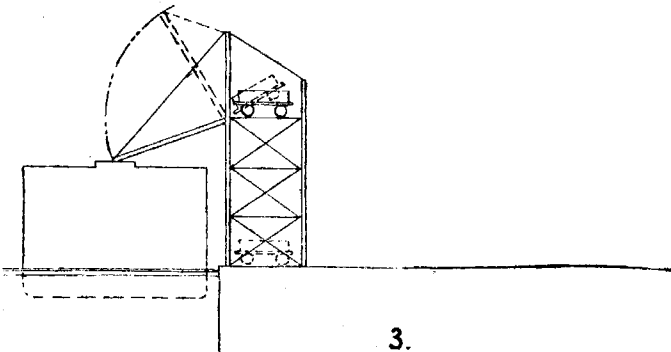
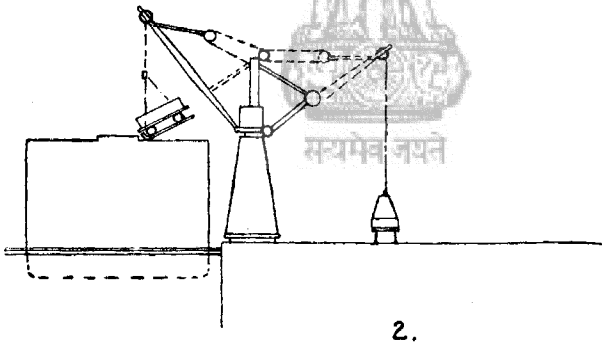
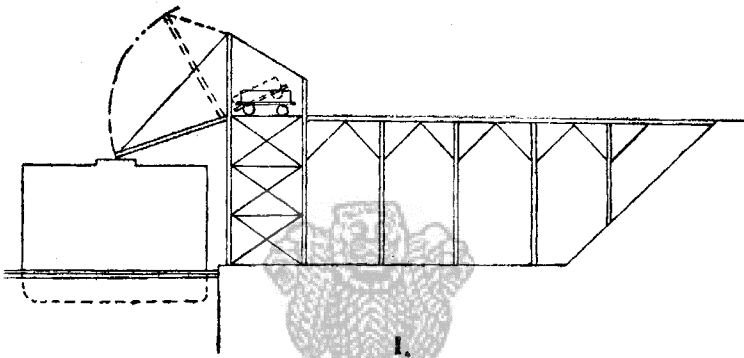
(c) number of vessels burning oil only calling at the port;

(d) number of vessels burning coal only calling at the port; and

(e) number of vessels burning oil or coal calling at the port.

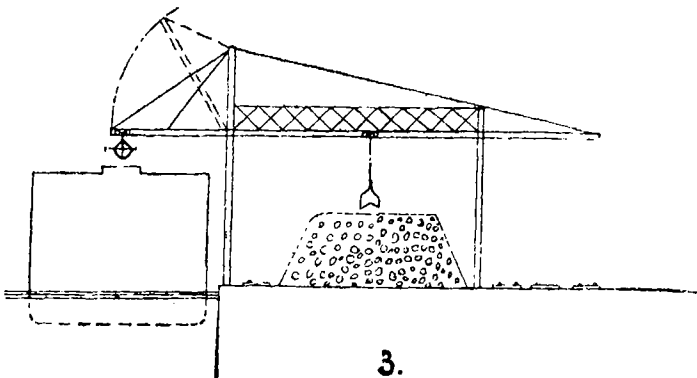
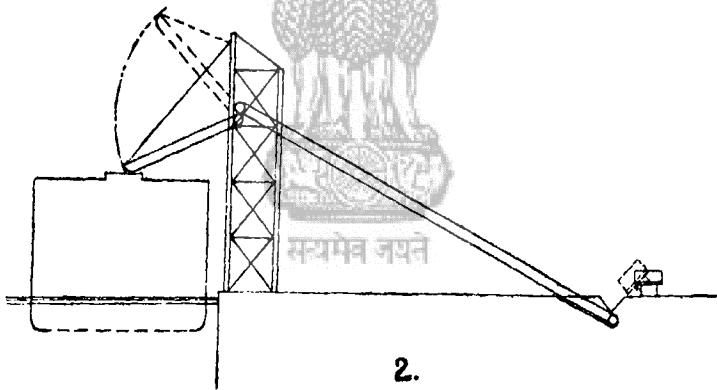
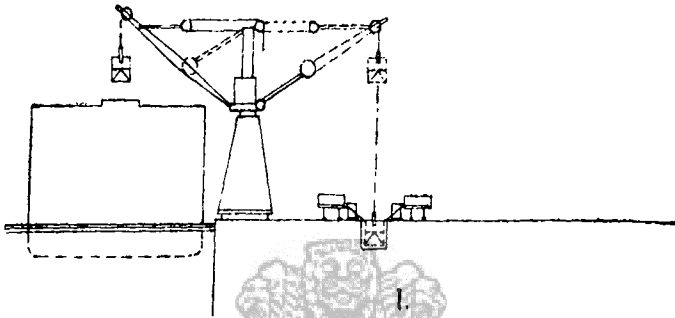
MECHANICAL COAL PLANTS.

TYPE A.



MECHANICAL COAL PLANTS.

TYPE B.



B.—EVIDENCE.

(i) Bengal-Nagpur Railway.

Sir GEORGE GODFREY, Agent, Bengal-Nagpur Railway.

WRITTEN STATEMENT.

(i) Staff.

1. Organisation of staff for coal traffic.—The movement of coal traffic is supervised by the Transportation Manager in Calcutta.

The Superintendent of Transportation (Traffic), who works directly under him, regulates the supply of wagons from the main line system to the coalfields.

The Coal Manager decides the number of such wagons to be supplied to each of the 3 coalfields, and allots wagons to individual collieries.

The District Traffic Superintendent, Adra, arranges the distribution of the wagons to the 3 fields in accordance with the Coal Manager's requirements, and the supply and clearance of the wagons to individual collieries in the Chaurashi and Radhanagar fields.

The Assistant Traffic Superintendent at Bhojudih, who works directly under the Coal Manager, supervises the distribution of wagons to individual collieries in the Jharia field, the Head Train Controller, Bhojudih, being responsible to the Assistant Traffic Superintendent for the actual distribution.

The distribution to individual collieries in the Jharia field is effected by means of Pilot trains made up and despatched from Bhojudih, Bhaga and Mohuda at which stations the power and staff necessary for this purpose are stationed.

The manner in which indents are submitted and allotments are made is dealt with in the reply to Question No. 8.

(ii) General questions of wagon supply.

2. Total amount of coal transported, 3 Number of wagons supplied to coalfields and 4 Number of wagons supplied to other traffic.—The following statements give all the information asked for:—

Statement A shows tonnage of traffic since 1912 under 4 heads—General, Military Stores, Railway Materials and Coal.

Statement B shows tonnage of coal separately for the first and second-half of each calendar year.

Statement C shows number of wagons separately for the first and second half years from 1912 up-to-date.

5. Distribution of empties between coal and other traffic.—The supply of wagons for coal, and for traffic other than coal, is regulated from day to day by a large number of varying factors.

Broadly, during periods when the demand for wagons for the movement of general traffic and the movement of coal is in excess of the supply, the available covered wagons are supplied for general traffic of a damageable nature, and open wagons for coal, or for traffic moving in the direction of the coalfields or Calcutta.

Many covered wagons loaded with traffic in the direction of Calcutta are provided at destination with return loads, and the balance is sent to the coalfields.

6. Influence on wagon supply of (a) additions to, and (b) pooling of, wagons and (c) general improved facilities.—It is impossible to answer this question by figures. Additional wagons have naturally increased the number of wagons available for supply to collieries and the pooling of wagons eliminates marshalling at the coalfields and permits of the free use of foreign wagons which formerly had to be worked back to the parent line. No figures can, however, be quoted to show the additional wagon supplies obtainable from this system, and it is by no means certain that any improvement in supply of wagons under the pool is not neutralised by the large number of wagons held up at times for repairs.

7. Average turn-round of coal wagons.—(a) In normal circumstances wagons take approximately three days from the time they arrive at Bhojudih empty, until they arrive back from the Colliery Siding loaded, weighed, adjusted, invoiced, and ready for onward despatch.

(b) Under the same conditions the turn-round between Bhojudih and Kidderpore Docks is 11 days, out of which 2 days is occupied moving to and from the Docks. The figures have been obtained from the actual record of wagon movements, as shown by the Wagon Record Branch of the Transportation Manager's office. The records for 1912 have been destroyed, so the information required for that year cannot be supplied.

(iii) Indents and allotment to collieries.

8. Indents and wagon allotment.—(1) The allotment is made personally by the Coal Manager at Adra.

(2) Indents in original are received in the Coal Manager's Office at Adra, where they are checked and classified.

(3) The method of collecting the original indents from collieries is as follows:—

(A) *Jharia coalfield.*—Colliery Companies submit their original indent to the Station Masters nearest their sidings and these Station Masters collect the indents from all collieries situated within their spheres.

A special peon is sent out daily from Adra to whom the Station Masters deliver all original indents and these are received in the Coal Manager's Office between 8 and 9 p.m. daily.

(B) *Radhanagar coalfield.*—The Station Master, Radhanagar, collects all the original indents in the afternoon from collieries situated on this branch, and sends them in original to the Coal Manager, Adra, on the night on which they are received or early next morning.

(C) *Chourashi coalfield.*—Details of each colliery's indent are telephoned to the Coal Manager, and the original indent subsequently sent the next day.

(4) We have three coal bases, viz., Radhanagar, Chourashi and Bhojudih. A separate allotment for Bokharo-Jharia is not made but the allotment for this section is included along with the allotment for Bhojudih.

(5) At present the supply of wagons is made according to the order of precedence laid down and when making the allotment, the capacity of each of these Bases is taken into account.

(6) The method of allotment is as follows:—

A special set of staff work during the night, who, on receipt of indents from each colliery, compare them with the special supplies authorised to each colliery (for which detailed registers are maintained) and classify the indents according to the various classifications for each direction separately.

(7) In the morning the same staff, who worked during the night, together with another set of staff again scrutinize each item of each indent, and check the same with the detailed supply register maintained to see whether a supply is due or the order has been completed.

(8) All items which have been completed are struck off and a statement is made of the indents which have been disallowed, showing the reason for same against each entry.

(9) After the indents are checked, classified and summarized a forecast statement is made out showing the total indents under each classification separately.

(10) The Coal Manager then makes the allotment and as allotment under each classification is made, the details of allotment for each direction are noted, and are watched while the allotment is in progress, to see that the capacity of any one section and any one direction is not exceeded, according to the limitation of despatches for each direction in force from time to time, and when the maximum capacity of any one direction is reached further allotment for that direction under the other classifications in the order of precedence is disallowed.

(11) After the allotment is made by the Coal Manager, challans in duplicate are made out for each Colliery Company separately, showing the number of wagons allotted for each class separately. The challans are then sent by special peons by the first goods-trains to Bhojudih and through the Guard to Chourashi and Radhanagar, and at the same time details of allotment made to certain colliery pilots which start work in the evening are also phoned to stations concerned, so as to enable them to start the formation of the pilots.

(12) On receipt of the challans at the Base station, the original copy is made over to the Guard for delivery to the Colliery Company at the time of supply of empties and the duplicate copy is retained at the Weighbridge Office.

(13) The Guard while making the supply of empties enters the individual wagon Nos. against each entry of the allotment in the original challan for the guidance of Colliery Managers to load wagons accordingly. This system is introduced to ensure loading of high tonnage wagons to down-country and low tonnage wagons to up-country.

(14) The next day when the loads are drawn out the Colliery Managers surrender the original challans duly signed to the Guard and also make over the Declaration Notes for the wagons loaded, and these on arrival at the Base station are made over to the weighbridge staff.

(15) The weighbridge staff check the Declaration Notes with the allotment shown in the challans and after satisfying themselves that the booking of wagons by the colliery has been made in accordance with the authorized allotment certify to that effect on the challan and do the further work of weighing, invoicing, etc. The original challans for the day are then returned by the weighbridge clerk to the Coal Manager, where they are again checked with the original allotment sheet by a Traffic Inspector, specially appointed for the purpose. The challans are then filed and maintained for any further reference.

9. Over-indenting.—Over-indenting is permissible to nine times the extent of the available siding accommodation. The reason for this as follows:—

The coal traffic is divided up into the nine principal groups (*vide* Statement C) and each colliery is permitted to submit an indent to the full extent of its siding accommodation for wagons for despatch in each group so that full advantage can be taken of allotments that are being made for each group each day.

The extent to which over-indenting takes place is shown in the statement C put up in reply to Question 10.

10. Wagon supply compared with indent.—(a) and (b). Statement C attached shows number of wagons indented for and the total number supplied on indent for each half-year since 1912.

Indents from the Chief Mining Engineer for Railway Loco coal are shown separately on statement B. Figures previous to 1922 are not available.

(iv) *Capacity to handle coal traffic.*

11. Wagon capacity of coalfields.—Any restriction in the free movement of coal traffic must be liable to cause congestion, since it must retard or stop altogether the steady stream of traffic moving towards the point where the restriction exists.

This stream of traffic is made up of—

- (a) wagons being cleared by pilots from collieries,
- (b) wagons at weighment bases,
- (c) wagons on the way between weighment bases and the point of restriction.

The extent of the congestion depends on the number of wagons on their way towards the point of restriction, and the extent of the restriction, and, as the point of restriction or the extent of restriction cannot be fixed, it is impossible to say how many wagons can be loaded daily without risk of congestion.

Provided there is no restriction on the free movement of traffic, other than the restriction on loading in proportion to the capacity of each route, the number of wagons that can be supplied to, and cleared from, B. N. Railway collieries daily is the same in both cases, *viz.*, 835.

The number of wagons that can be cleared daily from B. N. Railway collieries, *plus* the number received from the E. I. Railway is 1,125. These figures should, however, be taken as maxima.

A statement E is attached showing how these figures have been arrived at.

The number of wagons supplied to, and cleared from, Railway collieries, which are included in the above figures is 140.

12. Maximum capacity for export and bunker coal.—The maximum amount of export and bunker coal that we can handle in present conditions between the coalfields and the Kidderpore Docks, Howrah and Shalimar is estimated at approximately 900,000 tons to 1,200,000 tons a year.

This estimate is approximate only since the extent of our capacity for the movement of this traffic over the single line section between Bankura and Midnapur is dependent on the amount of other traffic, both General and Coal, requiring movement over this section.

(v) *Working of sidings.*

13. Working of sidings.—The Jharia coalfield is divided into pilot train sections, collieries on each section being served by a separate pilot train working out from Bhojudih, Mohuda and Bhaga respectively.

Details of the sections, the engine bases, and the number of engines required to work the pilots are given in the attached statement F.

The sidings on a pilot section are not served more than once in 24 hours.

The pilot, which supplies empties, clears loaded at the same time, and separate pilots are not worked for these two purposes except in one special case.

The section of each pilot train is arranged so that each pilot can supply 50 empties and clear 50 loaded wagons in 12 hours working time, the time being calculated from the departure of the pilot from its base until its return to its base.

In the cases of certain sections situated near to the engine bases, one engine is able to serve more than one section, and this is shown in the statement.

The B. N. Railway supplies empties to collieries situated on the B. N. Railway, for traffic which has to go *via* Katrasgarh (E. I. R.) and Pathardihi (E. I. R.); and B. N. Railway pilot trains clear such wagons when loaded and work them into Katrasgarh or Pathardihi (as the case may be), where

the wagons are made over to the E. I. Railway in the Exchange Sidings (set apart specially for this purpose) at these stations. These B. N. Railway pilot trains bring back wagons loaded at collieries situated on the E. I. Railway with traffic for the B. N. Railway, routed *via* the above mentioned stations. Such wagons are brought into the Exchange Sidings by E. I. Railway pilot trains.

A third Exchange point exists at Bhaga on the B. N. Railway and the conditions as regards serving the collieries with empties, drawing out the loaded, and making them over in exchange sidings are the same as at the other two exchange points, with the exception that the E. I. Railway engines work into Bhaga with the loaded wagons collected from their collieries and clear the loaded wagons collected by the B. N. Railway from its collieries. The exchanged wagons are made and taken over in separate exchange sidings designed for this purpose only.

(vi) *Weighment, marshalling and despatch of wagons.*

14. Weighment, marshalling and despatch of wagons.—The Guards of pilot trains when clearing loaded wagons from the colliery sidings must receive with such wagons Declaration Notes in which the colliery must show the destination of each wagon, the name of the consignee and the party who will pay the freight charges. The Declaration Notes must give the number of each individual wagon and must cover all loaded wagons cleared from the siding.

The Guard must see that the wagons entered in the Declaration Notes include all wagons which he draws out from sidings and also that each wagon has labels and that the labels have been properly filled in and affixed by the colliery staff.

A sample form of the Declaration Note is attached G.

On arrival of the pilot train at the weighment bases, the Declaration Notes are handed over at once to the weighbridge staff who are responsible for filling in the gross, tare, and nett weights of each wagon and seeing that the destination shown for each wagon in the Declaration Note is in accordance with the allotment made by the Coal Manager. The destination of these wagons is checked again in the Coal Manager's Office with the allotments made by him.

The pilot train on arrival is examined by the train examining staff, and as soon as this examination is completed, it is drawn into a weighbridge shunting neck and then is pushed over the weighbridge.

The weighbridge number-taker has taken previously the tare weight, carrying capacity and the number of each individual wagon in his hand-book, and as the wagons are pushed over the weighbridge, the weighbridge clerk calls out the wagon number and its gross weight. These are recorded by the number-taker in his hand-book and the information recorded in the hand-book is then transferred to the weighment register and Declaration Notes.

The numbers of individual wagons requiring adjustment and the extent of adjustment required are intimated to the weighbridge contractor, and such wagons are shunted on to the adjustment sidings. The remaining wagons are then placed on marshalling sidings and are made up into trains for despatch.

Meanwhile the weigh clerks have prepared the necessary invoices and railway receipts to cover the wagons, and have made over the railway receipts to the private weigh clerks who are maintained by the collieries to supervise weighment on their behalf and to collect such receipts.

Wagons are made up into trains in two groups, one for *via* Anara, and the other for *via* Adra, and as soon as a complete train is made up, it is examined again by the train examining staff, and as soon as this work is completed, and wagons marked sick have been detached and others attached in their places, the train is despatched.

This is the system in force in the Jharia fields. It applies also in the Chourashi and Radhanagar fields with the exception that the wagons are not made up into groups for *viâ Anara* or *viâ Adra* prior to despatch from those fields.

As far as possible through trains are made up for one destination or one junction.

15. Gravity yards and automatic weighbridges.—There are not any gravity yards in the B. N. Railway coalfields.

Mohuda and Loyabad are supplied with automatic weighbridges, and it is the intention to supply all weighment bases with automatic weighbridges as soon as possible.

16. Maintenance of weighbridges.—The Bengal-Nagpur Railway is responsible for the maintenance of its own weighbridges.

In order to ensure this work being properly carried out, an agreement was entered into with Messrs. W. & T. Avery, Ltd., the well-known Weighbridge Manufacturers, in 1924 to undertake the maintenance and repairs of all weighbridges on this railway. Weighbridges are tested by Messrs. W. & T. Avery, Ltd., twice in a year, but if at any time a weighbridge is out of order, Messrs. W. & T. Avery, Ltd., send their representative to test the weighbridge on being referred to.

(vii) *Extensions and improvements to depôt yards.*

17. Improvements in depot-yards.—The following extensions and improvements are in progress or have been completed.

Bhojudih.

(1) Bhojudih marshalling yard is being completely remodelled. In this yard there were 21 tracks with a capacity of 600 wagons per diem each way. The number of tracks is now being increased to 35 with an estimated capacity of 1,200 wagons per diem each way. The old engine shed has been removed, and a new twelve-engine shed constructed.

The estimated cost of the Remodelling Scheme is Rs. 14,91,709 and the remodelling is expected to be completed by March 1925.

Mohuda Remodelling.

(2) Mohuda is little more than an ordinary roadside station with weighbridge facilities. It is to be converted into a marshalling yard, capable of dealing with 300 wagons daily in each direction, and an engine shed is being provided to accommodate the engine power necessary to deal with this amount of traffic. The new yard will consist of 33 tracks of all descriptions, and an engine shed to accommodate four engines and capable of extension to a twelve-engine shed, will be constructed. The total cost of the remodelling scheme is estimated at Rs. 24,04,784.

Malkera.

(3) Malkera yard is being remodelled and converted into a Weighment Base station at an estimated cost of Rs. 3,63,743.

Mohuda Avoiding Line.

(4) An avoiding Line with Block Huts at either end is under construction, connecting the Jharia and Grand Chord Lines, so that traffic to and from Malkera can proceed to and from Bhojudih, without passing through Mohuda Yard. The estimated cost of this scheme is Rs. 1,57,376.

This line is expected to be ready for use by May 1925

Rukni Empty Yard.

(5) Stabling accommodation has been provided at Rukni, so that an imprest of 400 empty wagons can be kept as an imprest for feeding the coalfields *via* Bhojudih. These empty sidings have been provided at a cost of Rs. 1,45,350.

Anara station.

(6) This station was a roadside station, but is now in course of conversion as a marshalling yard with an estimated capacity of 400 to 500 wagons per diem each way.

A Locomotive shed and yard are being provided.

The first stage of the conversion will be completed about September 1925, and 15 engines will then be stationed at Anara, and all traffic despatched from Bhojudih in the Tatanagar and Chakardharpur directions will be despatched to Anara to be made up into trains there. At present this work is done both at Bhojudih and Adra.

The estimated cost of the conversion is Rs. 40,85,888.

Adra Avoiding Line.

(7) In order to keep Adra yard free from congestion, and to permit coal from Radhanagar, Asansol, and Chaurashi for Tatanagar and *via* Sini, to move forward with the least delay, an Avoiding Line has been constructed which gives direct access for traffic coming from the Asansol direction to proceed to Anara yard, without passing through Adra. The Avoiding Line was constructed at a cost of Rs. 3,93,588.

Joychandipahar Remodelling.

(8) To give effect to the above scheme it was necessary to remodel Joychandipahar where the Asansol line diverges in the Adra and Anara directions. The expenditure incurred at Joychandipahar was Rs. 1,49,442.

Block Huts in the Colliery District.

(9) To facilitate the movement of coal traffic, the following Block Huts have been constructed in recent years at a cost as shown against each.—

	Rs.
Amlabad	12,008
Dugda	19,191
Amla	26,958

Jitpur connection.

(10) The Bhowra branch line has been extended to connect with the Jamadoba loop, thus providing an alternative route for trains going *via* Parbad and *via* Bhowra, and affording relief to the Jherria Chord between these points.

Bhutgaria Crossing-station has been provided at the junction of the Bhowra and Jamadoba loops.

The total cost of the Jitpur connection and Bhutgaria crossing-station was Rs. 99,324.

Khanoodih.

(11) The conversion of Khanoodih yard into a Weighment Base station at an estimated expenditure of Rs. 55,829 has been sanctioned, and work has been commenced.

Doubling.

(12) A considerable amount of additional line capacity has, and is being, provided, to enable the coal traffic to be moved more freely. The lengths already opened are as follows:—

	Mileage.	Cost. Rs.
Bhojudih to Rukni	9.248	10,13,368
Anara to Kandra	53.464	88,88,333
Khargpur to Cossye	5.3	6,27,499
Gomharria to Korkai	4.7	4,31,052
Sini to Chakardharpore	22.097	26,47,296

The length from Chakardharpore to Goilkeria is under construction, a distance of 20.9 miles, and the estimated cost of the work is Rs. 25,67,539.

(viii) The 10 hours and 20 hours system of supply.

18. **The 10-hour system.**—There is nothing laid down definitely as to what constitutes the “10-hour” system, but on this railway the “10-hour” system is understood to mean that 10-hours free time will be given for loading wagons placed in position not later than 7 A.M., the ten hours being calculated from the time of placing in position after 5.30 A.M.

The Coal Traffic Conference of 1912 recommended that the supply of empties should be made at regular hours and in time for early morning work and that loaded wagons should be removed as soon as possible after they were loaded. Endeavour was made to give effect to this recommendation of working the 10-hour system as defined above, but this was found unsuitable for all collieries, and two of our largest consignors were unable to work to this system. The experiment was not therefore proceeded with. The supply of empties is made to collieries at regular hours and they are given 20 hours free time for loading.

(ix) Overloading and load lines.

19 and 20. **Overloading at collieries.**—There are no special reasons why wagons are overloaded, except lack of suitable supervision. The colliery knows the specific gravity of the coal and the cubical capacity of each wagon can be measured, but the Loading Contractor cannot always be present at all sidings when wagons are being loaded.

We allow one ton above and 2 tons below the marked carrying capacity.

Penalties are not levied for overloading, unless the number of wagons overloaded exceeds 5 per cent. of the total number loaded.

For wagons overloaded in excess of this percentage, penalties are levied as follows:—

Over 5 per cent. and up to 7 per cent. Re. 1 per wagon.

Over 7 per cent. and up to 10 per cent. Rs. 3 per wagon.

Over 10 per cent. Rs. 10 per wagon.

The following is an illustration of the manner in which these penalty charges are assessed monthly.

Number of wagons despatched.	Number of wagons overloaded.	Overloaded percentage.	Penalty.
606	144	Over 10 per cent.	Rs. 10 per wagon on 144 less 30=114=Rs. 1,140.

A statement H is attached giving the information required in regard to the levy of penalties for overloading, and also the percentage which the number of overloaded wagons on which penalty was levied bore to the total number of wagons despatched from the collieries.

21. **Load line on wagons.**—All wagons supplied to the collieries have a load line based on a specific gravity of 42 cubic feet.

The load line is intended as a guide, and each Colliery Manager knowing the specific gravity of his coal is supposed to give instructions for loading up to some definite margin above or below the load line. Reliance on the load line to prevent overloading is entirely a matter of the intelligent use of the line as a guide.

22. **Desirability of collieries marking special load lines.**—This would be desirable provided suitable supervision is exercised.

(x) *Demurrage.*

23. **Demurrage.**—Demurrage—

- (a) on vehicles ordered and waiting to be loaded by senders but not loaded or loaded but not made available for despatch within the prescribed free time, and
- (b) on loaded vehicles waiting to be discharged by consignees but not discharged within the prescribed free time,

will be charged at the rate of one anna per ton of carrying capacity per hour or part of an hour after the expiry of the free time, whether the consignment is complete or not.

- (c) In calculating wagon demurrage, each wagon will be treated as a separate consignment.

24. **Extent of demurrage charged.**—

Year.	Total number of wagons on which demurrage collected.	Amount realised.	Total number of wagons despatched.	Percentage of the wagons on which demurrage collected to the total despatch.
		Rs. A. P.		
1922 . .	272	5,527 11 0	225,277	·12 per cent.
1923 . .	331	7,316 4 0	202,134	·16 " "
1924 . .	65	2,091 3 0	189,456	·03 " "

(xi) *Check on delays in transit.*

25. **Prevention of delays to wagons.**—A check is maintained on:—

- (a) the supply of empty wagons,
- (b) the clearance of loaded wagons from collieries, by means of wagon supply sheets and challans to see that wagons supplied during one day are cleared the following day.
- (c), (d) a chart is maintained at Bhojudih showing the average detentions to wagons in the yard.

A special check is not maintained on the transit of wagons between the coalfields and the Docks.

(xii) Co-operation of collieries.

26. **Co-operation of collieries with the Railway.**—They give very little assistance as regards (a) the fixing of wagon-doorpins after loading, or

(b) loading covered wagons up-country as far as possible,

(c) loading wagons to one destination in groups is regulated by the Coal Transportation Officer's allotments.

(xiii) Wagon supply.

27. **Proportion of covered and empty wagons supplied.**—The railway can give no estimate.

28. **Supply of open wagons only to particular collieries.**—The supply of open wagons to collieries loading coal for the docks, collieries using mechanical loading appliances and collieries loading coal for consumers who have installed mechanical unloading appliances would result in a considerable loss of capacity owing to the large amount of work that would be involved in sorting out these wagons and in some cases in keeping them on hand until pilots serving such collieries were ready to go out.

29. **Double wagon-supply to collieries with mechanical loading.**—This answer depends on the time taken to load a train load of wagons under such mechanical appliances. It is obvious that if a colliery was so equipped as to load a complete train in say one hour or thereabouts the pilot engine would remain until the train was loaded and a double service could therefore be maintained.

30. **Possibility of stabling wagons in colliery sidings.**—Empties are despatched to collieries by the pilot services at regular intervals according as empties arrive at base stations. The suggestion would not therefore lead to any quickening up of loading.

31. **Splitting up of rakes among collieries on same pilot section.**—There no objection other than that mentioned.

32. **Objection to issuing several railway receipts for rakes and half rakes.**—If a consignee makes use of the rake system, he is obtaining an advantage in exchange for saving the railway additional work. The issue of separate railway receipts for each wagon would entail additional clerical work. It seems to be quite fair to ask the consignee to arrange for distribution of his coal amongst separate customers at destination without calling upon the railways to issue separate documents.

(xiv) Prepayment of freight.

33. **Objection to return to the "freight to pay" system.**—The objection is based on the impossibility of destination stations being assured of receiving freight due on coal booked to pay, but so far as this railway is concerned there is no objection.

(xv) Sidings.

34. **Applications for sidings.**—On receipt of an application for a siding it is referred to the Engineering and Traffic Department for their opinion as to whether the siding applied for is feasible from the Engineering and Traffic point of view. If the reports are favourable the applicant is asked to submit a fee for carrying out the survey and for preparing the plan and estimate. When the latter are completed the Traffic Departments report whether the lay out of the siding as proposed is suitable, and whether the traffic to be carried from the siding will justify the expenditure on construction. The plan and estimate are then forwarded to the applicants for their approval and they are asked to deposit their share of the estimated cost, if they approve of the scheme. On receipt of this amount, steps are taken to proceed with the construction. In some cases if the applicants desire

they are allowed to undertake the earthwork themselves and provide the ballast.

35. Number of sidings.—(a) Assisted sidings, total 154, miles 80.61, (b) Railway sidings total 6, mileage 66.43, (c) Private sidings, total 1, mileage 0.54.

36. Different classes of sidings.—(a) Assisted sidings. Sidings under this class are constructed in cases where a particular individual or company requires a siding for some particular traffic. The cost of this type of siding is borne partly by the railway and partly by the applicant; the railway share consists of permanent-way materials and fittings and the applicant's share covers the cost of acquisition of land, earth-work, etc. This form of siding was introduced in order to assist Colliery Companies, but this has been extended to other industries as well. The applicants are required to sign an agreement known as the Memorandum of Terms embodying 23 clauses. Assisted sidings are constructed mainly for the applicant, but the railway reserves the right to extend such a siding to other properties if this is to the advantage of all concerned. Should this be done, however, the original applicants are indemnified by being refunded a $\frac{1}{2}$ share of their cost, the second half share being borne by the Company served by the extension.

(b) Railway sidings are constructed entirely at the cost of the railway in cases in which it is found that the provision of one siding will serve a number of collieries owned by different persons and companies, in which it is not possible to allocate the total cost among all the applicants and when the applications are for short length of siding which normally would not justify the construction of an assisted siding for each individual. In these cases the railway bears the total cost of construction and the companies served pay a siding charge.

(c) Private sidings are only laid within the immediate precincts of a mill or other industrial site. The applicant bears the total cost of the siding within the boundaries of its properties including permanent-way. The connection, however, between the private siding and the main line is treated as assisted siding. The maintenance of the private sidings is carried out by the railway at the cost of the siding holder to insure that it is kept in fit condition to run rolling stock.

The primary distinction between the private and assisted siding is in the matter of land and permanent-way since the railway will not provide the permanent-way at its own cost unless the land on which it is laid has been acquired for the railway, and therefore in sidings of this type as the question of land acquisition does not arise the railway has no right to interfere, apart from refusing to run stock over the siding. Private sidings are also constructed in cases where the railway considers that the traffic likely to be offered from such a siding would not justify the expenditure estimated for, but the applicants still insist upon having a siding constructed at their sole cost.

(xvi) *Preferential wagon supply for export and bunker coal.*

37. Preferential wagon supply for export and bunker coal.—The railway would favour this provided the traffic is moved in full or half rakes. There is a margin of capacity available between the coalfields and Calcutta which could be used for the development of additional coal traffic, and preference is necessary, if the export coal traffic is to be moved as required, i.e., when steamers are ready to take in coal.

38. Possibility of preference being conditional on not overindenting.—There would be no objection to this, in fact it might be advantageous.

39. Possibility of preferential supply being cumulative.—This would be possible.

(xvii) *Coal Transportation Officer.*

40 and 41. Value of Coal Transportation Officer to Railway.—The Coal Transportation Officer is of value to this railway as a connecting link between

ourselves and the public, and as the person responsible for deciding the preference that should be given to coal despatches and I am in favour of the continuance of his appointment without any modification of the present arrangement.

(xviii) *Preferential transport for export and bunker coal.*

42. Possibility of preference en route to goods trains with export or bunker coal.—Goods trains carrying export and bunker coal for the Kidderpore Docks need not necessarily take preference over all other goods trains en route.

But I would agree that the railways should have power to exercise discretion in regard to the grant of preference, especially in cases where coal consignments were required for particular steamers already lying at a berth.

(xix) *Opening of steamer berths.*

43. Opening of steamer berths.—I consider that one week's notice should be given.

(xx) *Mechanical loading and unloading appliances at the docks.*

44 and 45. Mechanical unloading appliances.—Mechanical unloading appliance at the docks to suit all types of wagons would permit of a quicker turn-round of wagons than is possible at present. But in view of the almost insuperable difficulty of providing such a universal mechanical appliance I would recommend the fitting up of a berth with a mechanical revolving tippler to handle open 4-wheeled wagons.

46. Unloading appliance at Cossipore Power House.—This was inspected by Mr. Clark in 1923 and at that time was working satisfactorily. Its use for covered wagons is however open to danger for the labor employed.

(xxi) *Demurrage at the docks.*

47. Recovery of demurrages from Port Commissioners.—The following is an extract from our agreement with the Port Commissioners, which explains the system in force:—

“8. The goods stock of the Bengal-Nagpur Railway and foreign railways will be allowed to remain on the Port Commissioners' Railway 48 hours free of hire after which hire charge shall be levied at the rate of 1 anna 8 pies per hour for a 4-wheeled vehicle and 3 annas 4 pies per hour for a bogie vehicle. Hire will be paid on the aggregate time wagons are on the Commissioners' Railway during each month less the free time of 48 hours per wagon. The number of hours each wagon is on the Commissioners' Railway shall be calculated from the time the wagon arrives in the reception lines of the Commissioners' Railway to the time the wagon is placed in the departure sidings of the Commissioners' Railway.”

48. Details of demurrages levied.—The revised agreement came into force from 1st March 1922, and demurrage realised and paid by the Port Commissioners is noted below:—

	No. of wagons.	Am.unt.
		Rs. As. P.
March—December 1922	160	605 14 0
January—December 1923	197	938 13 0
January—September 1924	199	847 6 0

The percentage for the above period is 0·37, 0·45 and 0·57 respectively.

Demurrage credited by the Port Commissioners prior to the revised agreement is noted below:—

	Rs.
March 1919—February 1920	2,350
March 1920—February 1921	49,502
March 1921—February 1922	6,311

The number of wagons for the above periods is not available, the records having been destroyed.

(xxii) *Railway freights and terminal charges.*

49. Rates and terminals for export and bunker coal sent to Calcutta.—The necessary information is given in the attached Statements Appendices L, J. and K.

50. Rates and terminals for coal sent to and from other ports.—(a) The necessary information is given in Appendices L. and M.

(b) *Nil.*

51. Classification of coal for rate charging.—Coal at railway risk is classified 1st class, i.e., at 38 pie per maund per mile which is the lowest classification in the general classification of goods. There are many other commodities which are similarly classified. But as coal is sent in bulk in full wagon loads and as the volume of traffic is large, reduced owners' risk rates, based at a scale fixed, are charged. Certain maxima and minima for coal at owners' risk have been fixed by the Government of India, and they are:—

Per Md. per Mile.
Pie.

Maxima rates:—

- i. For all distances up to 400 miles, inclusive—

For all distances up to 200 miles	0.165
Plus for any distance in excess of 200 miles and up to 400 miles inclusive	0.15
- ii. For all distances above 400 miles—

For the first 400 miles	0.15
Plus for any distance in excess of 400 miles	0.10

Minima rates:—

- | | |
|--|-------|
| For distances up to 300 miles | 0.10 |
| Plus for any distance in excess of 300 miles and up to 500 miles inclusive | 0.066 |
| Plus for any distance in excess of 500 miles | 0.05 |

The above maxima and minima apply over the Bengal Nagpur and East Indian Railways and certain other railways.

Their application, however, is not universal. Over such railways which have adopted the Bengal Nagpur and East Indian Railways' scale for coal, the scale is applied on the through distance from start to destination. In the case of ordinary goods, the classified, schedule or special rates apply on the separate distance over each railway.

52. Variations in charges on export and bunker coal.—The scale for charges on coal was revised from time to time to suit the economic conditions then prevailing, one important reason being the necessity to increase revenue to enable the railway to meet greatly increased working costs—one of the results of the war. The basis on which existing charges to Calcutta have been fixed are—

Per Md. per Mile.

1 to 200 miles	0.165
plus 201 to 400 miles	0.13

On export coal, a rebate of 25 per cent. is allowed from the rate after deducting the sending-end terminal and Calcutta charge.

53. Running cost of coal-train.—The receipts on a train load of 1,000 tons of coal from the Jharia fields to the docks are Rs. 3,964. It is impossible to calculate with any accuracy the cost of running such a train. The gross load would be about 1,450 tons.

We can estimate the cost by figures based on the expense of carrying one ton of goods one mile, and this is obviously not entirely applicable to a full train load of coal.

The statistical figure of cost for one ton-mile is 3.02 pies excluding interest charges. If we include interest charges, attributable by proportion to goods traffic, the cost of a ton-mile is 4.72 pies and multiplying this by 202 miles and 1,000 tons we obtain a figure of Rs. 4,966, which indicates that the railway loses Rs. 1,000 on the train load of coal, and as 25 per cent. rebate is allowed on export coal the loss becomes Rs. 1,990 if the train load of coal is to be exported.

Another method is by the cost of one train-mile, namely, Rs. 5.02, and this multiplied by 202 miles gives Rs. 1,014. To this we must add interest on the ton mileage basis, *viz.*, Rs. 1,789. The cost would then be Rs. 2,803 against earnings of (3,964—991) Rs. 2,973 after deduction of rebate. This method allows the railway Rs. 170 profit on the train load, but allows no margin for working empty wagons back to the coalfields.

By whatever method an attempt is made to calculate the cost of running a train load of coal and to compare it with the earnings, the result is bound to show that even short distance coal is carried at cost price or below, the fact being that railways have different schedules of rates for different goods, and the higher valued goods can and do bear higher rates in accordance with the rate-fixing principles which are in use all the world over.

54. Possibility of reducing charges on coal.—I do not consider that at present it is possible to reduce rates for coal on the Bengal-Nagpur Railway system, or further to increase the rebate granted on export coal.

The results explained in the answer to 53 are sufficient evidence of this, but the general working results of the railway may also be referred to.

The working costs of the Bengal-Nagpur Railway last year were 65.40 per cent. of gross earnings, and the return on capital was 4.45 per cent. The railway is spending large sums now on improving its open line facilities and in particular for improving the outlets from the coalfields, because there is more coal offering for transport than can be handled. The various improvements are expected to be more or less completed within the next 12 months. Any reduction of coal-rates now would mean loss of earnings and a lower return on capital, because the railway could not carry a sufficiently heavier tonnage to compensate for the reduced rates.

55. Flat-rates from all ports of coalfields.—A flat-rate is at present charged from all despatching points in a specific field. The coalfields in Bengal and Bihar and Orissa—Himgir-Rampur field excluded—and the rates chargeable from each are—

1. Jharia.—Rates chargeable from Bhaga.
2. Bokharo-Jharia.—Rates chargeable from Bhaga *plus* Re. 0-2-0 per ton.
3. Bokharo.—Rates chargeable from Bhaga *plus* Re. 0-5-0 per ton.
4. Sanctoria.—Rates chargeable from Radhanagar.
5. Chaurashi.—Rates chargeable from Chaurashi.

This grouping into zones appears to be satisfactory from the traders' point of view.

If, however, it is implied that one flat-rate should apply from *all* the above fields, there would be no objection to this provided the rate applicable from the field furthest away from Calcutta is fixed as the flat-rate.

56. **Seasonal rates.**—The adoption of the suggestion to introduce “slack season” rates would only be justified if it increased coal despatches sufficiently to increase the gross revenue of the railway. Apart from the doubt that this result would be obtained, statistics show that there is no material decrease in coal despatches during the rains. Further, during the rains—the capacity of the B. N. Railway was—and even now it still is—severely taxed in dealing with the daily traffic offering, necessitating booking being periodically restricted. In the circumstances, the introduction of a lower rate during what is termed the “slack season” would only involve a loss in revenue to the railway without return benefit in the form of a better distribution of despatches.

57. **Rates and terminals for loco. coal.**—Coal for use on foreign railways is charged at the following scale from all collieries in Bengal, Bihar and Orissa:—

	P. md. p. mile.
	Pie.
Up to 200 miles	0-15
Plus 201 to 500 miles	0-07
Plus 501 and above	0-06

This scale which was introduced on and from 1st December 1922 is lower than the scale applicable to coal for the public, but in both cases the “terminals” are the same over the B. N. Railway, viz., Re. 0-4-0 per ton. The reason for the scale for charge being different is explained briefly below:—

In 1905, the Railway Board sanctioned the introduction of a special scale on coal with a view to developing long distance traffic over railways and made the scale applicable to all coal—public or loco. This was the position up to 31st March 1920.

From 1st April 1920, a new scale was introduced, the basis for charge being enhanced. This revised scale was, however, applied to public coal only; that is to say, “loco.” coal continued to be charged at the previous scale. The reason for this differentiation presumably was to avoid working costs on foreign railways being increased.

From 1st April 1921, the public coal scale was revised; in this case also the revised scale applied to public coal only. After the 1921 revision, the B. N. and E. I. Railways decided that they could no longer afford to carry coal for foreign railways at rates other than those applicable to the public and intimation to this effect was sent to all railways and also to the Railway Board. The Railway Board, however, objected to this proposal, but in due course agreed to the introduction of a revised scale for the carriage of “Loco.” coal for foreign railways. This scale came into operation on and from 1st December 1922 and is the one now in force. The view of the B. N. Railway is that the rates for public coal and coal for foreign railways should be charged at the same scale.

58 and 59. **Payment of terminal charges to Port Commissioners.**—Except in the case of coke booked to the Shalimar Coal Depôt, the whole of the Calcutta terminal charge is paid over to the Port Commissioners.

The Calcutta charges on coal and coke recovered from the public are:—

Re. 0-4-6 per ton on coal.

Re. 0-9-1 per ton on coke.

The charges payable to the Port Commissioners on all coal and coke traffic are:—

1. At Shalimar Coal Depôt, Re. 0-4-6 per ton.

2. At Kidderpore Docks, Re. 0-9-1 per ton.

In the case of dock traffic therefore, the railway has to make good from its earnings a sum of Re. 0-4-6 per ton on all coal.

(xxiii) *The rebate on coal and its effects.*

60. **Effects of export coal rebate.**—The rebate of 25 per cent. was introduced from 1st January 1924. From this date up to the end of October 1924, the total amount of coal shipped from Calcutta was 1,040,826 tons as against 801,136 tons during the corresponding period last year, or an increase of 239,690 tons.

This additional tonnage represents an increase in the gross revenue of the two railways which carry this traffic of approximately Rs. 45,000.

61. **Payment of rebates.**—Claim is submitted in a prescribed form—see Appendix O. The claim should be made in terms of local Rate Advice No. 25, item 13 of 24th July 1924—see Appendix N.

The time taken for checking and granting refunds differs in Local and Foreign traffic. By Foreign traffic is meant traffic booked from Bengal-Nagpur Railway collieries and carried part of the way by East Indian Railway to the docks.

In the case of Local traffic, the payment is made in 10 days, but in Foreign traffic it depends on reply being received from the East Indian Railway. A suggestion has been made for the collecting railway to make the payment and debit the other railway with the specified percentage of their earnings, which will enable payments to be made as in the case of local traffic.

62. **Rebate versus concessional rate.**—The rebate system is a “protective” measure. It prevents the possibility of the concession rate being used for coal said to be for export but subsequently not exported.

63. **Rebates on other commodities.**—There is only one such instance on Bengal-Nagpur Railway, i.e., a rebate of 15 per cent. on piece-goods, yarn and cotton twist and sewing thread from Nagpur and *via* and Rajnandgaon to Shalimar and *via* for direct shipment to other than Indian Ports. A similar rebate is granted by G. I. P. Railway on booking from Nagpur to Bombay. This rebate was originally introduced in 1897 and has very seldom been utilised. In fact, no payments have been made on this account since 1915. The question of withdrawing the rebate is under consideration.

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(xxiv) *The working of the coal depôts at Howrah and Shalimar.*

64. **Position as to the coal depôts.**—The Bengal-Nagpur Railway can carry coal direct to the Port Commissioners' Coal Depôts at Shalimar or to the Bengal-Nagpur Railway Depôt, but coal for the East Indian Railway Howrah Depôt is routed from the coalfields *via* the East Indian Railway.

65. **Coal-depôt rents.**—A statement P as asked for is attached. The B. N. Railway lease from the Port Commissioners a plot of land North of the Port Commissioners' Shalimar Coal Depôt, measuring 335 cottahs. Rent in respect of the whole of the plot, which includes three sets of service lines and several pathways between plots, is charged by the Port Commissioners. The railway can sublet the plots only, leaving the area occupied by the sidings and pathways for general use. Prior to January 1923, the railway was charging its sub-tenants the same rate of rent as it had to pay to the Port Commissioners. In December 1922 it was found that the railway was recovering Rs. 2,294 per mensem from its tenants against its liability to the Port Commissioners for Rs. 3,626-12-0, representing a loss of Rs. 1,332-12-0 to the railway per mensem. It was then decided that as the service lines and the pathways exist for the general use of all the plot-holders, the excess payment which had hitherto been borne by the railway should be recovered in proportion from the depôt-holders. As, out of a total of 335 cottahs, only 226 cottahs could be marked out for coal plots it was decided that the plot-holders should be charged rent at rates 50 per cent. higher than the railway was paying to the Port Commissioners. This is the reason for the variation since January 1923. The variation since November 1920 is due to reassessment of rent by Port Commissioners.

(xxv) Prevention of pilferage.

66. **Pilferage from wagons.**—The question of coal thefts is one that has always been a matter of concern to this railway.

In 1923 a special Watch and Ward Branch was created under the control of a Superintendent and this Branch immediately concentrated their efforts on reducing coal pilferages.

It was known that the heaviest thefts took place in the Adra Yard and while coal trains were working up the heavy grade leading out of Bhojudih Station.

As a result of the efforts of the Watch and Ward Branch it is understood that thefts in these two places have now been reduced to a minimum if not altogether eliminated.

With the expansion of the Branch and the extension of its activities throughout the Bengal-Nagpur Railway system it is hoped that coal thefts will be so reduced as to be negligible.

(xxvi) General recommendations.

67. **Suggestions for quickening coal transport and stimulating export of coal.**—In my opinion the following are the chief points requiring constant attention, efforts, and improvements for the purpose of speeding up the transportation of coal, and particularly of export coal:—

- (1) Loading of complete trains from one despatcher to one destination.
- (2) Installation of weighbridges at large collieries, so as to overcome the delays that occur in adjusting badly loaded wagons at weighment stations.
- (3) Supervision of colliery sidings to prevent pilferage of wagon equipment.
- (4) Immediate attention on behalf of railways to the equipment of all wagon stock with vacuum brake and special attention to its maintenance in good condition.
- (5) Elimination of delays by railways at engine-changing stations for train examination.
- (6) Provision of mechanical loading at collieries and in the case of big owners, overhead bins securing the possibility of loading full trains in 2 or 3 hours.
- (7) Mechanical handling appliances at the docks.

(xxvii) Coke.

68. **Coke.**—With the exception of the answers to Questions 19, 20, 21 and 22 the answers apply to coke as well as coal.

(xxix) Coal traffic via Waltair.

71. **Wagons made over to Madras and Southern Mahratta Railway at Waltair.**—The maximum number of wagons which we are in a position, under normal conditions, to make over daily to the Madras and Southern Mahratta Railway at Waltair is 150, and this number is apportioned between coal and commodities other than coal, according to the demand that arises from time to time for the movement of coal and other commodities, and the possibility of supplying suitable wagons for general traffic.

In actual practice the proportions of coal and general merchandise, despatched *via* Waltair throughout the year, are approximately $\frac{2}{3}$ ths and $\frac{1}{3}$ ths respectively.

The factors which prevent our making over a large number of wagons daily are limited line capacity and engine power. The line capacity is being

improved at the present time by the construction of 9 crossing stations between Khargpur and Waltair and the introduction of the Train-control system between Khurda Road and Waltair. The Train-control system was brought into use during the current half-year between Khargpur and Khurda Road, and a marked improvement in the movement of trains and consequent increase in line capacity has been effected in consequence.

The possibility of running heavier engines over the section between Khargpur and Waltair is now under examination and, if it is decided that this should be done, it is anticipated that a marked improvement in the power position would result.



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STATEMENT A.

*Tonnage of traffic handled in thousands since 1912.**(Vide questions 2, 3 and 4.)*

Year.	General.	Military Stores.	Railway materials for B.N. Ry.	COAL.		TOTAL.
				Public and Foreign Rys.	B.N.Ry.	
1912 . .	2,723	2	251	3,014	425	6,415
1913-14 .	3,119	1	347	3,018	438	6,923
1914-15 .	2,703	2	395	3,305	490	6,895
1915-16 .	3,046	5	364	3,320	478	7,213
1916-17 .	3,349	31	300	3,644	465	7,769
1917-18 .	3,146	112	271	3,484	527	7,538
1918-19 .	3,317	58	228	3,501	627	7,731
1919-20 .	3,658	34	422	3,517	622	8,253
1920-21 .	3,587	11	425	3,744	591	8,358
1921-22 .	3,774	3	337	3,558	726	8,398
1922-23 .	4,118	3	526	3,816	743	9,206
1923-24 .	4,752	4	806	3,820	702	10,144

STATEMENT B.

*Despatches of Coal in thousands (includes B. N. R. Loco. coal).**(Vide questions 2, 3 and 4.)*

				Upward.	Downward.	TOTAL.
				Tons	Tons	Tons
Year 1912	{ 1st half	.	.	593	1,110	..
	{ 2nd ..	.	.	670	891	..
TOTAL				1,263	2,001	3,264
.. 1913	{ 1st half	.	.	634	1,058	..
	{ 2nd ..	.	.	718	879	..
TOTAL				1,372	1,937	3,309
.. 1914	{ 1st half	.	.	747	918	..
	{ 2nd ..	.	.	784	904	..
TOTAL				1,531	1,822	3,353
.. 1915	{ 1st half	.	.	861	852	..
	{ 2nd ..	.	.	854	769	..
TOTAL				1,715	1,621	3,336
.. 1916	{ 1st half	.	.	1,112	739	..
	{ 2nd ..	.	.	1,126	761	..
TOTAL				2,238	1,503	3,741
.. 1917	{ 1st half	.	.	1,233	790	..
	{ 2nd ..	.	.	1,059	636	..
TOTAL				2,292	1,426	3,718

					Upward.	Downward.	TOTAL.
					Tons	Tons	Tons
Year 1918	{ 1st half	.	.	.	1,419	637	..
		.	.	.	13,14	640	..
	TOTAL				2,733	1,277	4,010
,, 1919	{ 1st half	.	.	.	1,223	657	..
		.	.	.	1,439	658	..
	TOTAL				2,662	1,315	3,977
,, 1920	{ 1st half	.	.	.	1,215	790	..
		.	.	.	1,164	958	..
	TOTAL				2,379	1,658	4,037
,, 1921	{ 1st half	.	.	.	1,262	734	..
		.	.	.	1,415	666	..
	TOTAL				2,677	1,400	4,077
,, 1922	{ 1st half	.	.	.	1,283	764	..
		.	.	.	1,468	687	..
	TOTAL				2,751	1,451	4,202
,, 1923	{ 1st half	.	.	.	1,349	593	..
		.	.	.	1,463	636	..
	TOTAL				2,812	1,229	4,041

STATEMENT C.

Statement showing particulars of number of wagons booked Up and Down for Coal Traffic.

(Vide questions 2, 3, 4, 9 and 10.)

Indent and supply 1912 to 1924.

Up=Up Local—Adra to Nagpur and Kutni Murwara.

South Local—Kharagpur to Waltair.

Via Nagpur—Kutni Murwara—Gomoh—Waltair.

Down=Down Local—Bhojudih to Asansol—Adra to Shalimar.

Via Ferry—Via Asansol.

Year.	No. of wagons booked.			Total No. of wagons supplied.			Total Indent.
	Up.	Down.	Total.	Up.	Down.	Total.	
1912 { 1st : .	23,613	61,300	84,913	..	..	81,102	145,774
2nd : .	27,948	51,538	79,506	..	..	72,651	170,504
1913 { 1st : .	26,801	59,040	85,841	..	..	78,830	196,516
2nd : .	30,056	51,460	81,516	..	..	85,909	170,021
1914 { 1st : .	30,701	54,305	85,006	..	..	73,334	153,292
2nd : .	33,801	49,325	83,126	..	..	82,133	168,349
1915 { 1st : .	39,008	49,222	88,230	..	..	85,835	174,065
2nd : .	37,704	41,476	79,180	..	..	73,819	129,359
1916 { 1st : .	48,965	44,893	93,858	..	..	93,999	251,277
2nd : .	48,069	40,707	88,776	..	..	76,988	164,747
1917 { 1st : .	55,727	43,817	99,544	..	..	104,431	154,950
2nd : .	53,070	30,072	83,142	..	..	98,081	193,036
1918 { 1st : .	61,473	41,279	102,752	..	..	107,568	153,513
2nd : .	57,885	38,920	96,805	..	..	93,267	202,512
1919 { 1st : .	55,212	42,042	97,254	..	..	103,927	189,861
2nd : .	66,238	40,785	107,023	..	..	95,431	201,315
1920 { 1st : .	57,854	43,911	101,765	..	..	109,718	151,619
2nd : .	53,831	53,826	107,657	..	..	108,758	213,340
1921 { 1st : .	57,371	44,103	101,474	..	..	101,734	191,491
2nd : .	58,938	43,265	102,203	..	..	90,556	224,510
1922 { 1st : .	59,125	54,043	113,168	..	..	101,306	241,512
2nd : .	68,102	44,007	112,109	..	..	91,850	136,959
1923 { 1st : .	48,855	41,489	90,344	..	..	89,590	223,218
2nd : .	66,134	45,656	111,790	..	..	85,901	444,212
1924 { 1st : .	58,797	49,822	108,619	..	..	100,603	538,657
2nd : .	70,724	29,458	100,182	..	..	94,820	168,214
(% months)							

"Number of wagons booked" includes : -

- Number of wagons supplied to B. N. R. Collieries for loading and booking to stations on or via that Railway by direct route.
- Number of wagons supplied to E. I. R. Collieries for loading and making over to B. N. Ry. via Exchange points for booking by B. N. Ry. to stations on or via that Railway by direct route.

"Number of wagons supplied" includes : -

- Number of wagons supplied to B. N. Ry. Collieries for loading and booking to stations on or via that Railway by direct route.
- Number of wagons supplied to B. N. R. Collieries for loading and making over to E. I. Ry. via Exchange points for booking by that Railway to stations on or via that Railway by direct route.

STATEMENT E.

*Maxima supplies and clearances.**(Vide question 11.)*

(1) Supplies to Sec- tions shown in column (2).	(2) Section.	(3) CLEARANCES FROM SECTIONS SHOWN IN COLUMN (2).					Total Clear- ances.
		Vid Gomoh	Vid Katras	Vid Bhaga	Vid Pathardih	Vid Bhojudih.	
235*	Bormo Branch	10*	20*	..	..	205*	235
50	Mohuda-Gomoh	20	..	..	..	30	50
25	Nowagarh-Malkera	..	..	..	..	25	25
75	(Malkera, Mohuda, Talgaria, Bho- judih.)	..	..	..	..	75	75
250	(Malkera, Bhojudih; J. C. Line.)	..	..	..	50	220	250
..	Vid Gomoh	50	50
..	Vid Katras	25	25
..	Vid Bhaga	125	125
..	Vid Pathardih
635		30	20	..	80	755	835

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(1) Supplies to Sec- tions shown in column (2).	(2) Section.	(3) CLEARANCES FROM SECTIONS SHOWN IN COLUMN (2).		Total Clearances.
		Vid Asansol.	Vid Adra and Anara.	
200†	Radhanagar and Chaurashi.	45	155	200
..	Vid Asansol	..	90	90
..	
200		45	245	290
..	
			TOTAL	1125

* Supplies and clearances by E.I.R. Pilots are not included.

† These supplies are made from Adra and Anara, and include loaded wagons arriving at Burnpur and Bengal Iron Works, which, after unloading, are supplied to the Coalfields.

STATEMENT F.

(Vide question 13.)

Name and No. of Pilot.	Section worked by Pilot.	Engine base.	No. of Pilot Engines required daily.
1. Quarry . . .	Sawang and Joint Colliery Ber-mo.	Ehojudih . . .	1
2. G. I. P. . . .	Kargali Colliery	„ . . .	1
3. Kalithan . . .	Ehojudih Talgaria	} „ . . .	1
4. Sudamdih . . .	Sudamdih Branch		
	Pathardih Link		
5. Bhourah . . .	Bhoura Colliery Sidings . . .	„ . . .	1
6. Jharapuker . . .	Jharapuker and Jitpur Colliery Sidings.	„ . . .	1
7. Sijua	Sijua Colliery, Loyabad Malkera (excluding Malkera Station).	„ . . .	1
8. Loyabad . . .	Loyabad Yard Sidings . . .	„ . . .	1
9. Bhutgaria . . .	Bhutgaria Parbad	„ . . .	1
10. Jamadoba I . . .	Bhutgaria Jamadoba	} „ . . .	1
11. „ II . . .			
12. Joint Colliery . . .	Joint Colliery Bermo . . .	„ . . .	1
12			10
13. Malkera I . . .	Mohuda Malkera	} Mohuda . . .	1
14. „ II	Mohuda Katrasgarh		
15. Dhorl	Dhorl Jamuniatand (excluding Bokaro Jherria Branch).	„ . . .	1
16. Khanoodih Kat-ras Connection I.	1st half of Khanoodih Con-nec-tion.	} „ . . .	1
17. Khanoodih Kat-ras Connection II.	2nd half of Khanoodih Con-nec-tion.		
18. Bokaro Jherria . . .	Bokaro Jherria Branch . . .	„ . . .	1
19. Mohuda I . . .	Mohuda Khanoodih	} „ . . .	1
20. „ II	Mohuda Jamuniatand		
21. „ III	Murlidih Branch		
22. Parbad I . . .	Bhaga Yard Sidings including Jamadoba Colliery Siding No. 6.	} „ . . .	*1
23. „ II	Bhaga Parbad		
			6

STATEMENT H.

Statement showing the number of coal wagons booked, overloaded and the penalty charges realised from collieries from 1922 to October 1924.

(Vide questions 19 and 20.)

	1922					
	No. of wagons on which penalty levied.	Total amount of penalty.	Total No. of wagons booked.	No. of wagons overloaded.	Percentage to the total of penalized wagons.	Percentage to total overloaded.
		Rs.				
January	349	694	16,823	1,126	2.1	6.71
February	355	710	17,153	1,041	2.1	6.07
March	233	306	18,671	1,257	1.36	6.73
April	294	588	18,762	1,661	1.57	5.67
May	213	426	18,516	937	1.15	5.06
June	222	444	17,118	1,276	1.28	7.45
July	213	466	23,895	884	1.86	3.69
August	492	984	18,238	1,381	2.7	7.57
September	471	942	17,396	1,615	2.7	9.28
October	416	832	18,641	1,586	2.2	8.53
November	438	876	17,269	1,423	2.5	8.23
December	434	868	22,591	1,185	1.8	5.17
TOTAL	4,140	8,280	2,25,277	14,772	..	..

	1923					
	No. of wagons on which penalty levied.	Total amount of penalty.	Total No. of wagons booked.	No. of wagons overloaded.	Percentage to the total of penalized wagons.	Percentage to total overloaded.
		Rs. A.				
January	356	2,019 0	16,529	1,216	2.1	7.36
February	452	5,971 0	16,195	855	2.79	5.28
March	366	4,504 0	16,257	949	2.2	5.84
April	361	3,274 0	15,948	875	2.2	3.87
May	155	1,219 0	15,195	639	1.02	4.22
June	209	1,445 0	15,448	706	1.3	4.57
July	362	2,922 0	17,161	954	2.1	5.56
August	290	1,238 0	17,172	867	1.7	5.04
September	372	1,623 0	17,472	926	2.1	5.80
October	325	1,452 8	17,836	909	1.8	5.10
November	514	2,244 0	19,382	1,196	2.6	6.18
December	340	1,456 8	17,589	1,002	1.9	5.69
TOTAL	4,101	29,368 0	2,02,134	17,094	..	..

	1924					
	No. of wagons on which penalty levied.	Total amount of penalty.	Total No. of wagons booked.	No. of wagons overloaded.	Percentage to the total of penalized wagons.	Percentage to total overloaded.
		Rs.				
January	345	1,453	16,750	1,089	2.06	5.80
February	370	1,398	16,886	1,160	2.2	6.87
March	238	1,730	18,135	1,018	1.3	6.61
April	542	4,547	20,640	1,515	2.6	7.34
May	279	2,394	19,806	985	1.4	4.97
June	249	1,869	16,402	884	1.5	5.8
July	507	4,348	18,444	1,341	2.7	7.29
August	330	3,143	20,278	1,283	1.9	6.33
September	628	4,978	21,777	1,596	2.9	7.32
October	539	4,541	20,378	1,291	2.6	6.25
November . . . . .	..	..	..	..	..	..
December . . . . .	..	..	..	..	..	..
TOTAL	4,087	30,386	189,496	12,118	..	..

STATEMENT I.

Rates for public coal, coke, and patent fuel from the Jharia field to Kidderpore Docks.

(Vide question 49.)

Calendar Year.	BUNKER.					
	Rate exclusive of all extra charges.	B. N. Riv. Terminal.	CALCUTTA CHARGES.		TOTAL.	
			Coal.	Coke.	Coal.	Coke.
	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.
1912	3 2 0	Nil	Nil	0 4 6	3 2 0	3 6 6
1913	}		Same as above			
1914						
1915						
1916						
From 1st January 1917 to 31st December 1917*.	3 2 0	0 2 0	Nil	0 4 6	3 4 0	3 8 6
1918*	}		Same as above			
1919*						
1920*						
(i) From 1st January 1920 to 31st March 1920.			Same as above			
(ii) From 1st April 1920 to 30th June 1920.	3 6 0	0 2 0	Nil	0 4 6	3 8 0	3 12 6
(iii) From 1st July 1920 to 31st December 1920.			Same as above			
1921			Same as above			
(i) From 1st January 1921 to 31st March 1921.			Same as above			
(ii) From 1st April 1921 to 31st December 1921.	3 11 0	0 2 0	Nil	0 4 6	3 13 0	4 1 6
1922*			Same as above			
(i) From 1st January 1922 to 31st March 1922.			Same as above			
(ii) From 1st April 1922 to 30th April 1922.	4 0 0	0 2 0	0 4 6	0 9 0	4 6 6	4 11 0
(iii) From 1st May 1922 to 31st December 1922.	4 0 0	0 4 0	0 4 6	0 9 0	4 8 6	4 13 0
1923*			Same as above			
1924*			Same as above			

* In booking from the Bokharo-Jharia and Bokharo Coalfields, served by the Bokharo Joint Railway, the following extra charges due to the Joint Railway are leviable in addition to the rates from the Jharia Field :—

- (a) From Bokharo-Jharia Field Re. 0-2-0 per ton.
 (b) From Bokharo Field Re. 0-5-0 per ton.

STATEMENT I.

Rates for public coal, coke, and patent fuel from the Jharua field to Kiddarpore Docks.

(Vide question 49.)

SHIPMENT.								REMARKS.
Rate exclusive of rebate and extra charges.		B. N. Rly. Terminal.		CALCUTTA CHARGES.		TOTAL.		
				Coal.	Coke.	Coal.	Coke.	
				Per ton.	Per ton.	Per ton.	Per ton.	
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
2 7 0	Nil	Nil	0 4 6	2 7 0	2 11 6		Rebate in force.†	
		Same as above					Do.	
2 7 0	0 2 0	Nil	0 4 6	2 9 0	2 13 6		Do. ‡	
		Same as above					Do. ‡	
		Same as above					Do. ‡	
		Same as above					Do. ‡	
3 6 0	0 2 0	Nil	0 4 6	3 8 0	3 12 6		Rebate withdrawn.	
		Same as above					Do.	
3 11 0	0 2 0	Nil	0 4 6	3 13 0	4 1 6		Do.	
		Same as above					Do.	
4 0 0	0 2 0	0 4 6	0 9 0	4 6 6	4 11 0		Do.	
4 0 0	0 4 0	0 4 6	0 9 0	4 3 6	4 13 0		Do.	
		Same as above					Do.	
3 0 0	0 4 0	0 4 6	0 9 0	3 8 6	3 13 0		Rebate introduced.†	

† Rebate applied to coal shipped to any port.

‡ Rebate limited to coal shipped to Burma and ports outside India only.

STATEMENT J

Rates for public coal, coke, and patent fuel from Chaurashi to Kidderpore Docks.

(Vide question 49.)

Calendar Year.	BUNKER.						
	Rate exclusive of all extra charges.	B. N. Rly. Terminal.	CALCUTTA CHARGES.		TOTAL.		
			Coal.	Coke.	Coal.	Coke.	
	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	
1912	2 13 0	Nil.	Nil	0 4 6	2 13 0	3 1 6	
1913	}	}	Same as above		2 15 0	3 3 6	
1924							
1915							
1916							
From 1st January 1917 to 31st December 1917.	2 13 0	0 2 0	Nil	0 4 6	2 15 0	3 3 6	
1918	}	}	Same as above		3 4 0	3 8 6	
1919							
1920—							
(i) From 1st January 1920 to 31st March 1920.			Same as above		3 4 0	3 8 6	
(ii) From 1st April 1920 to 30th June 1920.	3 2 0	0 2 0	Nil	0 4 6			
(iii) From 1st July 1920 to 31st December 1920.			Same as above				
1921—							
(i) From 1st January 1921 to 31st March 1921.			Same as above		3 8 0	3 12 6	
(ii) From 1st April 1921 to 31st December 1921.	3 6 0	0 2 0	Nil	0 4 6			
1922							
(i) From 1st January 1922 to 31st March 1922.			Same as above		4 1 6	4 6 0	
(ii) From 1st April 1922 to 30th April 1922.	3 11 0	0 2 0	0 4 6	0 9 0			
(iii) From 1st May 1922 to 31st December 1922.	3 11 0	0 4 6	0 4 6	0 9 0			
1923			Same as above		4 3 6	4 8 0	
1924			Same as above				

STATEMENT J.

Rates for public coal, coke, and patent fuel from Chaurashi to Kidderpore Docks.

(Vide question 49.)

SHIPMENT.								REMARKS.
Rate exclusive of rebate and extra charges.		B. N. Rly. Terminal.		CALCUTTA CHARGES.		TOTAL.		
				Coal.	Coke.	Coal.	Coke.	
				Per ton.	Per ton.	Per ton.	Per ton.	
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
2 4 0	Nil	Nil	0 4 6	2 4 0	2 8 6		Rebate in force †	
		Same as above					Do. †	
2 4 0	0 2 0	Nil	0 4 6	2 6 0	2 10 6		Do. †	
		Same as above					Do. †	
		Same as above					Do. †	
		Same as above					Do. †	
		Same as above					Do. †	
3 2 0	0 2 0	Nil	0 4 6	3 4 0	3 8 6		Rebate with- drawn.	
		Same as above					Do.	
0 6 0	0 2 0	Nil	0 4 6	3 8 0	3 12 6		Do.	
		Same as above						
3 11 0	0 2 0	0 4 6	0 9 0	4 1 6	4 6 0		Do.	
3 11 0	0 4 0	0 4 6	0 9 0	4 3 6	4 8 0		Do.	
		Same as above						
2 12 3	0 4 0	0 4 6	0 9 0	3 4 0	3 9 3		Rebate intro- duced.†	

† Rebate applied to coal shipped to any port.

‡ Rebate limited to coal shipped to Burma and ports outside India only.

STATEMENT K.

Rates for public coal, coke, and patent fuel from Radhanagar to Kidderpore Docks.

(Vide question 49.)

Calendar Year.	DUNKER.					
	Rate exclusive of all extra charges.	B. N. Riv. Terminal.	CALCUTTA CHARGES.		TOTAL.	
			Coal.	Coke.	Coal.	Coke.
	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.
1912	2 11 0	NH	NH	0 4 6	2 11 0	2 15 6
1913	}	}	Same as above		}	}
1914						
1915						
1916						
From 1st January 1917 to 31st December 1917.	2 11 0	0 2 0	NH	0 4 6	2 13 0	3 1 6
1918	}	}	Same as above		}	}
1919						
1920						
(i) From 1st January 1920 to 31st March 1920.			Same as above			
(ii) From 1st April 1920 to 30th June 1920.	3 0 0	0 2 0	NH	0 4 6	3 2 0	3 6 6
(iii) From 1st July 1920 to 31st December 1920			Same as above			
1921						
(i) From 1st January 1921 to 31st March 1921.			Same as above			
(ii) From 1st April 1921 to 31st December 1921.	3 2 0	0 2 0	NH	0 4 6	3 4 0	3 8 6
1922						
(i) From 1st January 1922 to 31st March 1922.			Same as above			
(ii) From 1st April 1922 to 30th April 1922.	3 9 0	0 2 0	0 4 6	0 9 0	3 15 6	4 4 0
(iii) From 1st May 1922 to 31st December 1922.	3 9 0	0 4 0	0 4 6	0 9 0	4 1 6	4 6 0
1923			Same as above			
1924			Same as above			

STATEMENT K.

Rates for public coal, coke and patent fuel from Radhanagar to Kidderpore Docks.

(Vide question 49.)

SHIPMENT.								REMARKS.	
Rate exclusive of rebate and extra charges.			B. N. Rly. Terminal.		CALCUTTA CHARGES.		TOTAL.		
					Coal.	Coke.	Coal.		Coke.
Per ton.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.			
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
2 2 0	Nil	Nil	0 4 6	2 2 0	2 6 6			Rebate in force. (c)	
		Same as above						Do. (c)	
2 2 0	0 2 0	Nil	0 4 6	2 4 0	2 8 6			Do. (d)	
		Same as above						Do. (d)	
		Same as above						Do. (d)	
		Same as above						Do. (d)	
3 0 0	0 2 0	Nil	0 4 6	3 2 0	3 6 6			Rebate with- drawn.	
		Same as above						Do.	
3 2 0	0 2 0	Nil	0 4 6	3 4 0	3 8 6			Do.	
		Same as above						Do.	
3 9 0	0 2 0	0 4 6	0 9 0	3 15 6	4 4 0			Do.	
3 9 0	0 4 0	0 4 6	0 9 0	4 1 6	4 6 0			Do.	
		Same as above						Do.	
2 10 9	0 4 0	0 4 6	0 9 0	3 3 3	3 7 9			Rebate intro- duced. (e)	

(e) Rebate applied to Coal shipped to any Port.

(d) Rebate limited to Coal shipped to Burma and Ports outside India only.

STATEMENT L.

Rates for public coal, coke and patent fuel to Bombay.

(Vide question 50.)

Calendar Year.	BUNKER AND SHIPMENT.				
	FROM THE JHARIA FIELD.				
	Rate exclusive of all extra charges.	Extra charges to be added.			TOTAL.
		Terminal.		G. I. P. Ry. Ghat charge.	
		B. N.	G. I. P.		
Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	
1912	10 12 0	Nil	Nil	0 8 0	11 4 0
1913	}	Same as above			
1914					
1915					
1916					
(i) 1st January 1916 to 31st August 1916.		Same as above			
(ii) 1st September 1916 to 31st December 1916.	11 8 0	0 2 0	Nil	0 8 0	12 2 0
1917*	}	Same as above			
1918*					
1919*					
1920*					
(i) 1st January 1920 to 31st March 1920.		Same as above			
(ii) 1st April 1920 to 31st December 1920.	12 2 0	0 2 0	Nil	0 8 0	12 12 0
1921*		Same as above			
(i) 1st January 1921 to 31st March 1921.		Same as above			
(ii) 1st April 1921 to 30th September 1921.	13 14 0	0 2 0	0 2 0	0 8 0	14 10 0
(iii) 1st October 1921 to 31st December 1921.	13 14 0	0 2 0	0 2 0	1 0 0	15 2 0
1922		Same as above			
(i) 1st January 1922 to 30th April 1922.	13 14 0	0 2 0	0 4 0	1 0 0	15 4 0
(ii) 1st May 1922 to 31st December 1922.	13 14 0	0 4 0	0 4 0	1 0 0	15 6 0
1923*	}	Same as above			
1924*					

* In booking from the Bokharo-Jharia and Bokharo Coalfields served by the Bokharo Joint Railway, the following extra charges due to the Joint Railway, are leviable in addition to the rates from the Jharia Field :—

- (1) From Bokharo-Jharia Field Re. 0-2-0 per ton.
 (2) From Bokharo Field Re. 0-5-0 per ton.

STATEMENT L.

*Rates for public coal, coke and patent fuel to Bombay.**(Vide question 50.)*

Calendar Year.	BUNKER AND SHIPMENT.				
	FROM CHAURASHI.				
	Rate exclusive of all extra charges.	Extra charges to be added.			TOTAL.
		Terminal.		G. I. P. Ry. Ghat charge.	
		B. N.	G. I. P.		
Per ton.	Per ton.	Per ton.	Per ton.	Per ton.	
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1912	10 10 0	Nil	Nil	0 8 0	11 2 0
1913	}	Same as above			
1914					
1915					
1916		Same as above			
(i) 1st January 1916 to 31st August 1916.		Same as above			
(ii) 1st September 1916 to 31st December 1916.	11 8 0	0 2 0	Nil	0 8 0	12 2 0.
1917	}	Same as above			
1918					
1919					
1920		Same as above			
(i) 1st January 1920 to 31st March 1920.		Same as above			
(ii) 1st April 1920 to 31st December 1920.	12 2 0	0 2 0	Nil	0 8 0	12 12 0.
1921		Same as above			
(i) 1st January 1921 to 31st March 1921.		Same as above			
(ii) 1st April 1921 to 30th September 1921.	13 14 0	0 2 0	0 2 0	0 8 0	14 10 0.
(iii) 1st October 1921 to 31st December 1921.	13 14 0	0 2 0	0 2 0	1 0 0	15 2 0
1922		Same as above			
(i) 1st January 1922 to 30th April 1922.	13 14 0	0 2 0	0 4 0	1 0 0	15 4 0
(ii) 1st May 1922 to 31st December 1922.	13 14 0	0 4 0	0 4 0	1 0 0	15 6 0.
1923	}	Same as above			
1924					

STATEMENT L.

*Rates for public coal, coke and patent fuel to Bombay.**(Vide question 50.)*

Calendar Year.	DUNKER AND SHIPMENT.				
	FROM RADHANAGAR.				
	Rate exclusive of all extra charges.	Extra charges to be added.			TOTAL.
		Terminal.		G. I. P. Ry. Ghat charge.	
	B. N.	G. I. P.			
	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1912	10 12 0	Nil	Nil	0 8 0	11 4 0
1913	}	Same as above			
1914					
1915					
1916					
(i) 1st January 1916 to 31st August 1916.		Same as above			
(ii) 1st September 1916 to 31st December 1916.	11 8 0	0 2 0	Nil	0 8 0	12 2 0
1917	}	Same as above			
1918					
1919					
1920					
(i) 1st January 1920 to 31st March 1920.		Same as above			
(ii) 1st April 1920 to 31st December 1920.	12 2 0	0 2 0	Nil	0 8 0	12 12 0
1921					
(i) 1st January 1921 to 31st March 1921.		Same as above			
(ii) 1st April 1921 to 30th September 1921.	13 14 0	0 2 0	0 2 0	0 8 0	14 10 0
(iii) 1st October 1921 to 31st December 1921.	13 14 0	0 2 0	0 2 0	1 0 0	15 2 0
1922					
(i) 1st January 1922 to 30th April 1922.	13 14 0	0 2 0	0 4 0	1 0 0	15 4 0
(ii) 1st May 1922 to 31st December 1922.	13 14 0	0 4 0	0 4 0	1 0 0	15 6 0
1923	}	Same as above			
1924					

STATEMENT M.

*Rates for public coal, coke and patent fuel to Madras.**(Vide question 50.)*

		BUNKER AND SHIPMENT.												
		FROM THE JHARIA FIELD.												
Calendar Year.		Rate exclusive of all extra charges.	Extra charges to be added.						TOTAL.					
			Terminal.											
			B. N.			N. E.					Via Waltair extra charge.			
		Per ton.			Per ton.			Per ton.						
		Rs. A. P.			Rs. A. P.			Rs. A. P.			Rs. A. P.			
1912	. . . . .	10	6	0	Nil			Nil			10 6 0			
1913	}	Same as above											
1914													
1915													
1916													
1st January 1917 to 31st December 1917*.		10	6	0	0	2	0	0	4	0	0	2	0	10 14 10
1918*	}	Same as above											
1919*													
1920*		समाप्त जयते												
(i) 1st January 1920 to 31st March 1920.		Same as above												
(ii) 1st April 1920 to 31st December 1920.		10	15	0	0	2	0	0	4	0	0	2	0	11 7 0
1921*		Same as above												
(i) 1st January 1921 to 31st March 1921.		Same as above												
(ii) 1st April 1921 to 31st December 1921.		13	5	0	0	2	0	0	4	0	0	2	0	13 13 0
1922*		Same as above												
(i) 1st January 1922 to 30th April 1922.		Same as above												
(ii) 1st May 1922 to 31st December 1922.		13	5	0	0	4	0	0	4	0	0	2	0	13 15 0
1923*	}	Same as above											
1924*													

* In booking from the Bokharo-Jharia and Bokharo Coalfields served by the Bokharo Joint Railway, the following extra charges due to the Joint Railway, are leviable in addition to the rates from the Jharia Field :—

- (1) From Bokharo-Jharia Field Re. 0-2-0 per ton.
 (2) From Bokharo Field Re. 0-5-0 per ton.

STATEMENT M

*Rates for public coal, coke and patent fuel to Madras**(Vide question 50.)*

Calendar Year.	BUNKER AND SHIPMENT.				
	FROM CHAURASHI.				
	Rate exclusive of all extra charges.	Extra charges to be added.			TOTAL.
		Terminal.		Via Waltair extra charge.	
		B. N.	N. E.		
	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.	Per ton. Rs. A. P.
1912	10 3 0	Nil	Nil	Nil	10 3 0
1913	}	Same as above			}
1914					
1915					
1916					
1st January 1917 to 31st December 1917.	10 3 0	0 2 0	0 4 0	0 2 0	10 11 0
1918	}	Same as above			}
1919					
1920					
(i) 1st January 1920 to 31st March 1920.	Same as above				
(ii) 1st April 1920 to 31st December 1920.	10 12 0	0 2 0	0 4 0	0 2 0	11 4 0
1921					
(i) 1st January 1921 to 31st March 1921.	Same as above				
(ii) 1st April 1921 to 31st December 1921.	13 5 0	0 2 0	0 4 0	0 2 0	13 13 0
1922					
(i) 1st January 1922 to 30th April 1922.	Same as above				
(ii) 1st May 1922 to 31st December 1922.	13 5 0	0 4 0	0 4 0	0 2 0	13 15 0
1923	}	Same as above			}
1924					

STATEMENT M.

*Rates for public coal, coke and patent fuel to Madras.**(Vide question 50.)*

Calendar Year.	BUNKER AND SHIPMENT.				
	FROM RADHANAGAR.				
	Rate exclusive of all extra charges.	Extra charges to be added.			
		Terminal.		Via Waltair extra charge.	TOTAL.
		B. N.	N. E.		
	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1912	10 6 0	Nil	Nil	Nil	10 6 0
1913	}	Same as above			
1914					
1915					
1916					
1st January 1917 to 31st December 1917.	10 6 0	0 2 0	0 4 0	0 2 0	10 14 0
1918	}	Same as above			
1919					
1920					
(i) 1st January 1920 to 31st March 1920.		Same as above			
(ii) 1st April 1920 to 31st December 1920.	10 15 0	0 2 0	0 4 0	0 2 0	11 7 0
1921					
(i) 1st January 1921 to 31st March 1921.		Same as above			
(ii) 1st April 1921 to 31st December 1921.	13 8 0	0 2 0	0 4 0	0 2 0	14 0 0
1922					
(i) 1st January 1922 to 30th April 1922.		Same as above			
(ii) 1st May 1922 to 31st December 1922.	13 8 0	0 4 0	0 4 0	0 2 0	14 2 0
1923	}	Same as above			
1924					

STATEMENT N

Extract from Bengal Nagpur Railway Local Rate Advice No. 25 of 1924

(Vide question 61.)

Item 13.—Rebate on export coal and coke.—The period of admission of claim for, and of the withdrawal of rebate on export coal and coke, will be reduced from “six months” to “three months.”

Item 8 of Local Rate Advice No. 1 of 1924 will, therefore, be revised as under:—

A rebate of 25 per cent. of the actual freight rate, excluding terminals or extra charges, etc., will be allowed at the end of every three months of a calendar year on all coal and coke, except bunker coal and coke, booked at owners' risk from the B. N. Railway colliery stations and exported by sea by any one consignee from the Port of Calcutta including Shalimar to any port in or outside India, as shown by the Bills of Lading.

Claim for rebate.—Any rebate not claimed within two months of the expiry of each quarter of a calendar year in which it accrued will be subject to a discount in accordance with the following scale:—

	per cent.
If claimed after two months, but within 3 months . . .	5
If claimed after two months, but within 4 months . . .	10
If claimed after two months, but within 5 months . . .	15
If claimed after two months, but within 6 months . . .	20

No rebate will be paid unless claimed within six months after the expiry of each quarter of a calendar year in which it accrued.

Coal or coke for the use of foreign railways must be consigned as public coal or coke and charged for accordingly in the first instance, in order to obtain the benefit of this rebate.

This rebate is liable to cancellation at not less than three months' notice counting from the end of each quarter.

STATEMENT O.

(Vide question 61.)

Statement of coal and coke, etc., exported during the month of

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by Messrs.

Invoice.	D. Note. No.	Colliery.	Station.		Weight of coal billed for.		Weight of coal exported.		Freight on export- ed quantity exclud- ing terminal and extra charges.		Rebate due of freight.		Name of steamer.	No. and date of bill or lading.
			From	To	Tons.	Tons.	Tons.	Tons.	Rate per Ton.	*Amount.	Rs.	A.		
Date.	No.													

* Terminal and Extra charges of 0-4-0 and -1 60-per ton are incorporated in through rates.

STATEMENT P.

B. N. RAILWAY SHALMAR COAL DEPOT.

Statement showing the rent charged for the use of Coal Depots since 1912.

(Vid: question 65.)

Locality.	From January 1912 to October 1920.			From November 1920 to December 1922.			From January 1923.		
	Rate per cottah.	Total paid to Port Comrs.	Total charged on Sub-tenants.	Rate per cottah.	Total paid to Port Comrs.	Total charged on Sub-tenants.	Paid to Port Commissioners.		Charged on Sub-tenants.
							Rate.	Amount.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Reverside Zone . . .	0 0 0	785 2 6	459 0 0	15 0 0	1,962 14 0	1,117 0 0	15 0 0	1,962 14 0	23 0 0 1,759 0 0
Intermediate Zone . . .	4 0 0	313 3 0	230 0 0	10 0 0	782 15 6	576 0 0	10 0 0	782 15 6	15 0 0 863 0 0
Roadside Zone . . .	3 0 0	377 8 6	222 0 0	7 0 0	880 14 0	588 0 0	7 0 0	880 14 6	10 8 0 763 0 0
Office plots . . .	Re. 1 per plot	..	13 0 0	Re. 1 per plot	..	13 0 0	..	..	Re. 1-8 per plot 20 0 0
	..	1,475 14 0	954 0 0	..	3,626 12 0	2,294 0	..	3,626 12 0	.. 3,410 0 0

**Sir GEORGE GODFREY, Agent, C. ISMAY, Esq., Commercial
Traffic Manager, A. M. CLARK, Esq., Transportation
Manager, C. W. A. CARROLL, Esq., Superinten-
dent of Rates and Development, A. BAYLEY,
Esq., Coal Manager, Adra, G. PELLY, Esq.,
District Traffic Superintendent, V. E. D.
JARRAD, Esq., Superintendent of
Transportation (Traffic).**

(ORAL EVIDENCE—THE 26TH JANUARY 1925.)

General.—*Mr. Clark.*—The number of colliery sidings on the Bengal-Nagpur Railway is 170, and of colliery depots 74. I do not know how this compares with the East Indian Railway.

New coalfields.—*Sir George Godfrey.*—The new coalfields which are or will be on the Bengal-Nagpur Railway system are as follows:—

(1) *The South Karanpura field.*—This is on the Bengal-Nagpur Railway, but a new line skirting the south side of it and running west towards Daltongunge is now being built by the Railway Board.

(2) *Bokaro-Ramgarh.*—This is on the Bengal-Nagpur Railway steam, but the line serving it is joint with the East Indian Railway.

(3) *Hutar.*—A new Central Indian Coalfields Railway is now being built by the State and it seems probable that the working of it will be entrusted to the Bengal-Nagpur Railway.

(4) *Talchar.*—This will be wholly on the Bengal-Nagpur Railway.

The development of these new fields will bring more coal traffic on to our lines: on the other hand new lines are being built and the extension *via* Daltonganj in particular will give a new outlet up-country to the North Western Railway and divert traffic which now passes over our other lines.

(*To Mr. Legge.*)—This will ease waste of wagon-days which results from sending coal *via* Katni and Katni-Marwara instead of direct to the North Western Railway. The opening up of the new lines to the new coalfields will not, I think, transfer the wagon-difficulty from the Jharia field to the new fields. The position as to wagons is largely due to the directions from which the demands for wagons on a particular field come: and the opening up of new fields will ease the wagon-difficulty in the Jharia field. The difficulty is largely in getting the trains through and not in any actual deficiency in the number of wagons. If the Madras Railway, for example take 10,000 tons of coal from Talcher it must necessarily relieve the outlet from Jharia. This would, I agree, be dependent on the Jharia collieries getting no new markets. In this connection I would remark that the tendency will be for coal to get cheaper when the new fields open out and for the demand to be stimulated.

The Bally Bridge.—*Sir George Godfrey.*—I think that the time will come, in ten or fifteen years perhaps, when the Bengal-Nagpur Railway trains will have to run over the Bally Bridge. The ferry in itself involves no delay, but for the past two years the west bank of the river has been silting and dredging has failed to remedy this. So we have had to move out our jetties further into the stream. This involved delay while we were holding conferences with the Port Commissioners, necessitated by the decision some fifteen years ago that nothing should be built beyond the line known as the Advance Reclamation Line. Before we could extend our jetties we had to get this decision altered. A re-survey was done and now the up-stream pontoon has been moved out. The other pontoon will be taken in hand but

will not be ready till next September. When the two are working, we shall be able to move up to 500 wagons a day, but 500 wagons per day may not be enough in ten or fifteen years' time.

Vishnupur-Howrah line.—*Sir George Godfrey.*—As regards the Vishnupur-Howrah project which was intended to give a more direct outlet from the coalfields to Calcutta, the position has altered since it was first put forward. It was actually sanctioned by the Railway Board at one time, but a little later this sanction was withdrawn. In any case the work could not have been taken up because at that moment the war broke out. Since then has come into existence the project for a new line from Barkakana to Chandil, to open up the new Karanpura field, which will relieve the Bankura-Kharagpur line. It is a single line and is now under construction. It gives an almost direct run in from the new coalfield to Calcutta.

(i) *Staff.*

1. **Organisation of staff for coal traffic.**—*Mr. Clark.*—We find that having the Coal Manager in the coalfields and not in Calcutta is quite satisfactory. I do not see that any marked advantage would result from transferring him to Calcutta. He does no work other than coal traffic.

The supervision that is exercised by the Superintendent of Transportation in Calcutta covers the movements of wagons to the coalfields districts, the clearance of loaded wagons from the coalfields districts to destination, supervision over the number of wagons supplied daily, watching if fluctuations occur in the wagon supply which are not obviously accounted for, and in short general supervision over the supply of wagons for, and the movement of wagons loaded with coal from, the coalfields.

Mr. Bayley.—The Assistant Traffic Superintendent at Bhojudih is responsible for moving general merchandise-wagons and for seeing that the pilots work correctly to time (the whole of the staff for this purpose is under him) and generally for supervising the work under me. Most of our work is in the Jharia coalfield: in the lower coalfield we have Radhanagar.

Mr. Clark.—(To *Mr. Legge.*)—The District Traffic Superintendent at Adra is responsible for the despatch of wagons to any from the Radhanagar and Chourashi fields and the working of traffic over the Adra district. He supervises wagons moving between Chakradharpore and Adra, between Asansol and Adra, Bhojudih and Adra and between Adra and Kharagpur. As regards Jharia, the Coal Manager is responsible only for the movement of the coal traffic from the Jharia field into Bhojudih. Jharia is separate from the Radhanagar and Chourashi fields and is worked from Bhojudih.

Mr. Clark.—(To *Mr. Stuart Williams.*)—Coal that goes from the new coalfield at Talcher to Calcutta will pass up the east coast main line *via* Kharagpur: the mileage will be about 306 miles and the mileage for charge from Talcher to the Docks will be about 80 per cent. more than the mileage on which the rate from Bhaga is based.

(ii) *General questions of wagon-supply.*

2. **Total amount of coal transported.**—*Mr. Clark.*—The following statement shows the tonnage of coal booked for (1) Kidderpore, (2) Shalimar and (3) Garden Reach and Brace Bridge Hall, separately since 1912.

Coal and Coke carried by the Bengal-Nagpur Railway to the undermentioned stations since 1912.

Year.	To Shalimar.	To Raukistopore.	To Garden Reach Station.	To Kidderpore Docks.	To (a) Garden Reach Coal Depot.	TOTAL.
1912	Tons. 239,838	Tons. 19,743	Tons. 2,934	Tons. 811,003	Tons. 241,778	Tons. 1,314,796
1913-14	228,140	19,576	4,842	601,271	240,505	1,094,334
1914-15	211,716	26,366	6,193	523,374	273,097	1,045,748
1915-16	179,250	26,849	3,463	371,232	159,504	740,298
1916-17	134,533	24,799	Not available.	461,757	155,316	* 776,405
1917-18	124,841	20,649	2,367	241,904	131,491	521,252
1918-19	120,105	17,947	1,021	208,994	111,532	549,599
1919-20	102,794	6,833	782	376,323	145,788	632,470
1920-21	151,973	906	1,788	603,907	218,316	1,036,830
1921-22	215,703	4,895	4,154	241,255	159,125	625,132
1922-23	213,850	5,651	...	86,698	156,343	462,545
1923-24	227,137	7,329	...	75,528	150,514	470,503

(a) Name was Brace Bridge Hall up to 1916-17 and thereafter Garden Reach Coal Depot.

The following is a statement of the total earnings from (1) coal traffic and (2) other merchandise, since 1912.

Goods earnings under the following heads :—

(All Figures are shown in Thousands.)

YEAR.	GENERAL GOOD ^s .										COAL.				GRAND TOTAL.		
	BROAD GAUGE.					NARROW GAUGE.					BROAD-GAUGE.		NARROW-GAUGE.				
	Merchandise General.	Military Stores.	Railway Material for construction.	Revenue Stores.	TOTAL.	Merchandise General.	Military Stores.	Railway Material for construction.	Revenue Stores.	TOTAL.	Total Broad and Narrow Gauges.	For B. N. Ry.	Public.	TOTAL.			
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			
1912	14,113	30	94	259	14,396	989	...	5	22	1,016	15,412	1,103	7,950	54	145	9,261	24,673
1913-14	14,800	17	133	174	15,144	1,350	...	9	15	1,274	16,418	1,217	8,379	50	143	9,580	26,007
1914-15	13,797	36	194	161	14,188	1,085	...	11	35	1,131	15,319	1,416	9,398	49	151	10,914	26,283
1915-16	15,406	100	64	231	16,331	1,069	...	6	34	1,109	17,440	1,455	10,406	49	133	12,043	29,482
1916-17	20,006	391	42	189	20,628	1,143	24	1	27	1,168	21,826	1,351	11,913	55	142	13,491	35,317
1917-18	21,210	1,316	71	163	22,760	1,161	382	3	35	1,381	24,141	1,530	12,403	60	121	14,101	38,316
1918-19	24,435	853	90	117	25,525	1,324	109	3	32	1,467	26,992	2,070	11,816	48	159	14,093	41,065
1919-20	25,734	365	124	106	26,410	1,554	109	6	32	1,602	28,111	1,079	11,951	39	159	14,128	42,239
1920-21	22,912	184	143	184	23,423	1,841	11	2	61	1,005	25,328	1,823	12,669	50	140	14,002	39,990
1921-22	24,804	67	142	228	25,231	1,563	5	1	61	1,649	26,880	2,311	12,367	54	252	15,014	41,894
1922-23	29,973	53	172	308	30,546	2,051	6	2	76	2,135	32,681	2,369	13,717	50	200	16,435	49,116
1923-24	31,779	60	330	608	32,777	2,110	6	5	60	2,186	34,964	2,560	12,255	57	246	15,118	50,081

3. Number of wagons supplied to coalfields.—*Mr. Clark.*—(To *Mr. Stuart Williams.*)—The reason why we have been making over more wagons to the East Indian Railway than we have been taking from them is practically entirely the trouble at the wagon-ferry. With the mitigation of the trouble the number made over to the East Indian Railway will be reduced.

Mr. Bayley.—Up to the latter part of 1924 the East Indian Railway were making over more wagons to us than we were giving to them, but since then the position has been reversed.

Mr. Clark.—We shall amplify this later.

Mr. Bayley.—In Statement C “wagons booked” includes wagons supplied by the East Indian Railway to collieries on their system but invoiced by the Bengal-Nagpur Railway, and it omits the wagons supplied by the Bengal-Nagpur Railway but invoiced by the East Indian Railway. On the other hand “wagons supplied” does not include those supplied by the East Indian Railway to collieries on the East Indian system and invoiced by the Bengal-Nagpur Railway, but it does include wagons supplied by the Bengal-Nagpur Railway to collieries on the Bengal-Nagpur Railway system and invoiced by the East Indian Railway.

5. Distribution of empties between coal and other traffic.—*Mr. Clark.*—The discrepancy between the opinion given in the second paragraph of our reply and our remark in our answer to Question 28, that the supply of open wagons to collieries loading coal for the docks results in a considerable loss in capacity, is due to our not having been precise in our language in the later reply: it should read “the supply of nothing but open wagons to collieries loading for the docks.” We are supplying open wagons for the docks as far as possible: to a certain extent anyhow we are managing to supply such wagons.

6. (b) Influence on wagon-supply of pooling of wagons.—*Sir George Godfrey.*—The wagon pool has, I agree, increased the supply of wagons in the coalfields, but the value of this increase is discounted by the trouble involved in laying up for repairs wagons, which were unfit to run. The general condition of the wagons is certainly improving but it is not improving nearly so quickly as it would if the railways were in competition. (To *Mr. Whitworth.*)—Sometimes we have to obtain spares from the owning railway and this sometimes involves days of delay. The owning railway itself may be short of spares and then tends to keep what it has got for use in its own shops. Meanwhile the wagon stands idle in our shops. The alternative would be to manufacture the defective part, but that might involve expenditure far in excess of the value of the part.

7. Average turn-round of coal wagons.—*Mr. Bayley.*—The figure of three days from the time when they arrive empty at Bhojudih until they arrive back loaded and are ready for onward despatch is rather too long: it is more like 2½ days.

Mr. Clark.—You see we allow 20 hours for loading. We anticipate increasing the rapidity of despatch between Bhojudih and the docks. As regards the other 9 days left on our figure of 11 days we have hitherto only been able to make up through-trains at Bhojudih for the docks to a limited extent, though we are gradually altering this for the better. To avoid blocking the yard we have had to move wagons out of Bhojudih as soon as trains could be made up there for Shalimar direction. These trains have usually to be made up again at Adra for Shalimar: they are then run through to Shalimar, stopping at Kharagpur for wagon-examination and being sent on thence to Shalimar whenever the latter place is able to receive them.

The handicap at Shalimar has been the sitting up of the river and the consequent restrictions on the working of the wagon-ferry. Before the wagons can go on to the ferry, the train has to be divided, has to wait for the ferry and has to be shunted on to it. The ferry crosses from the west side as soon as the ferry on the dock side is ready and then the wagon are

thrown up on to three lines: there they are collected and those for the docks are drawn away from the ferry-yard to the Garden Reach yard across a public road and are then sent on into the docks. The time taken between the arrival of the train at Shalimar and making over the wagons to the docks amounts to a good many hours, and the same process goes on in the reverse direction. When the tides are low the ferry has to stop working until there is sufficient water.

These factors account for the long delays (a) between Bhojudih and the docks, and (b) between arrival at Shalimar and arrival at the docks.

I should say that the delay between Shalimar and the docks accounts for something like 24 hours: but from to-day we hope to show a marked improvement, because we hope that the first of the two extensions of the ferry pontoons on the Shalimar side will be ready from to-day and that it will enable us to work wagons across for 24 hours per day. This will cut down the time taken to get wagons from Shalimar into the docks by at least a day.

When the time taken by us to get wagons down from the coalfields is contrasted with that taken by the East Indian Railway, you must remember that ours is a route 15 per cent. longer than theirs and that this must be taken into account in both directions: that means an extra day on our whole period of turn-round. Also they have not to get their wagons across a ferry and that saves them two days on the turn round. Besides that they show the time taken to get their wagons back only to Ondal and it is a question how long it takes them to get the wagons back from Ondal to Jharra. We have 200 miles to run while Ondal is only 130 miles or so from Calcutta: that means that we have to run an extra 140 miles in the two directions.

As I have said before we anticipate being able to expedite the movement of our coal trains.

(To Mr. Legge.)—Mr. Bayley.—I think that I shall be able to show that there is no foundation for the allegation of the Eastern Coal Company that wagons are seriously detained in the weighbridge at Bhojudih. We shall reply to Mr. Mackie's statement by letter. My impression is that Mr. Mackie refers really to the delay in getting his weightment returns. I may remark that we have been making over more than 50 per cent. of the Calcutta wagons to the Pathardihi yard of late. That probably means a delay of two or three days before he gets his returns back, as his company may not have a private weigh-clerk at Pathardihi such as they have at Bhojudih, where they get the papers in three or four hours because we hand them to their clerk. The reason why we are sending the wagons *via* Pathardihi is that there are restrictions on booking *via* the ferry.

Mr. Clark.—We are not sending coal wagons to the docks now *via* the ferry. We had to ask the East Indian Railway if they would take our coal traffic for the docks *via* Pathardihi: it means that we lose money but this step was in the general interest.

(To Mr. Whitworth.)—Mr. Bayley.—I cannot say why the half-rakes loaded at the railway collieries on the Bengal-Nagpur Railway have been arriving in dribbles at the docks spread over three or four days. Saltore and Deoli traffic have been made over to the East Indian Railway at Asansol, but I cannot say that we have made over full half-rakes to them. Perhaps some of the wagons were over-loaded and had to be taken out for adjustment. Then again some of them might have been marked sick and have had to be cut out: your rake might have lost 10 wagons that way. There are always some wagons bound to be cut out for over-loading. Suppose that seven wagons are cut out for adjustment in the yard. Or again seven or eight wagons might be wanted to make up a train-load and that would cut down your half-rake to 10 or 12. I consider that it is practically impossible to get a whole rake through from the coalfields to the docks what with over-loaded or sick wagons. If you have sick wagons it may be 24 hours before they are repaired and it may be 48 hours: they are shunted into the carriage and

wagon siding for the repairs to be carried out. This does not mean that defective wagons have been supplied: the damage may be done at the collieries or in pilot shunting.

Mr. Clark.—Then again as regards getting rakes through, the vacuum brake question comes up as well: a certain number of wagons with vacuum brakes are needed in the front of each train.

(*To Mr. Stuart-Williams.*)—*Mr. Clark.*—Our figure of two days to and from the docks (*i.e.*, from Shalimar to the docks and back again) is an approximate figure only: we have not got exact figures. The margin of 11 hours from our yard to the transfer siding, which remains if we calculate on the Port Commissioners' figures, is due to delays in crossing the road and in waiting for the ferry: but, since our figure is only approximate, the calculation is not quite fair to us.

(iii) Indents and allotment to collieries.

Indents and wagon allotment.—*Mr. Bayley.*—The Coal Manager at Adra personally does the detailed allotment of wagons to each colliery. As regards paragraph (13) of our answer, we want to load high-tonnage wagons down-country in order to get more coal to the docks. This is in accordance with the orders of the Coal Transportation Committee. They are open wagons.

Mr. Clark.—Probably it is not a really economic use of the wagons from the commercial point of view, but it is beneficial to export coal and it enables us to get more work out of the ferry.

Mr. Bayley.—With reference to (14), in our experience the colliery people do surrender the chalans at the proper time.

Mr. Bayley.—With reference to (15), Colliery weighbridge-clerks get free passes.

(*To Mr. Legge.*)—Bhojudih works the allotment for all Jharia. There are four engines at Mohuda. The Chourashi allotment is worked from Adra: there is a weighbridge at Chourashi and a pilot engine goes up there for a week at a time shuttling the empties and loaded wagons between Chourashi and the colliery sidings.

9. Over-indenting.—*Mr. Bayley.*—I do not see that there is any difference between a system of alternative indents and a system of over-indenting. Over-indenting is practically the same thing as alternative indents, because we allow the collieries to indent in every direction. The only stipulation is that they are not to indent for lower-priority wagons when they have a right to higher-priority wagons: for example, if a colliery has orders for locomotive coal and also for coal to the docks, which is lower-priority, they cannot indent for both with the remark that if a rake for the docks is available they do not want any wagons for locomotive coal. The reason why this is prohibited is that otherwise there is no sense in having a priority system.

(*To Mr. Legge.*) I do not think that over-indenting leads to the collieries putting in enormous indents full of numerous entries. It is not every colliery that takes advantage of the over-indenting system: in fact, usually, it is only the depot-holders. It is very occasionally that the big collieries get orders for rakes and indent for different directions. *Mr. Clark.*—Where we are in a different position from the East Indian Railway is that they have, practically speaking, only up and down traffic, though I admit that they have different routes. Besides that, we work coal on a much smaller scale.

Mr. Bayley.—I see no difference between over-indenting and alternative indents, but I do allow unlimited over-indenting. *Mr. Clark.*—The difference is that if you get indents for definitely different routes you are in a position to work up to the limit for each route. *Mr. Bayley.*—The collieries are fairly reasonable on the whole. They do not over-indent as much as they might in theory. The system does not increase our work appreciably. (*To Mr. Stuart-*

Williams.)—In theory they can indent for nine times the capacity of the colliery siding, once for each of the nine directions named at the top of Statement C. "Adra to Shalimar" and "via Ferry" are not the same thing. You may get wagons for Shalimar when the ferry route is restricted.

Mr. Clark.—The reason why the indents shown in Statement D for the first half of 1924 are practically four times as big as supplied, while in the second half they are only one and a half times as big, is I suppose that there was a restriction at the commencement of the first half of 1924.

Mr. Bayley.—There is over-indenting when wagons are not supplied.

Mr. Clark.—Similarly as regards the fact that the indents in the first half of 1923 were twice the supply, while those in the second half when normally things should be better were thrice the supply. I can only offer the surmise that it was because during the second half of 1923 booking down the east-coast section stopped and traffic was diverted *via* Nagpur: the result of this was that indents could not be met fully for wagons moving in the east-coast direction and therefore there was a great demand for them.

(*To Mr. Whitworth.*)—*Mr. Bayley.*—As regards the discrepancy between indents and supplies to Railway Collieries in the first half of 1924 when 64,000 wagons were indented for and 32,000 wagons were supplied as is shown in Statement D, although there is no reason why there should be over-indents for railway coal, I suppose that the difference was mostly due to restrictions *via* Waltair: it was some time after the restrictions were imposed that the Chief Mining Engineer reduced his programme. The collieries meanwhile indented in excess after falling short of their requirements.

(iv) *Capacity to handle coal traffic.*

11. **Wagon capacity of coalfields.**—*Mr. Clark.*—As regards statement F, our capacity for supply is 835 and our capacity to clear is 1,125 but the average wagon-supply is in the region of 700.

Mr. Bayley.—The difference between our capacity and the average wagon supply, which is actually 687.55, is due to the shortage of empties at some times and to restrictions at others.

Mr. Clark.—We cannot always work up to the maximum of course. The various limiting causes would be these—(i) engine power; (ii) sickness: recently we have had an epidemic of sickness on the east-coast section for 3 months, reducing the number of wagons that could be moved; (iii) restrictions, including restrictions brought about by sickness; we cannot work up to the full capacity of the railway when there is one route which is unable to work up to its capacity: (iv) shortage of wagons: but as a matter of fact the position as to empties has been unusually good during this past year.

Mr. Bayley.—As regards the small percentage of wagons for public supplies shown in the Coal Transportation Officer's weekly statement as 10 or 11 per cent., during these last 15 days we have been supplying full on indent for public supplies: I admit that the indents for public supplies have dropped off considerably.

Mr. Clark.—I might point out that we have moved very much more coal in 1924 than previously. In the half-year ending September 1924 we moved 2,606,000 tons as against 2,225,000 in the similar period for 1923. I can send in figures for the whole year to the Committee.

(*To Mr. Legge.*)—*Mr. Clark.*—As regards the supply of empties to the coalfields being in some degree governed by the demand for wagons for general merchandise, we have during the past year been getting more wagons down at Calcutta than we could put into the coalfields. We are continually making over empties to the East Indian Railway at Tikiapara.

We have no definite formula such as they have on the East Indian Railway governing the proportion that coal-wagons should bear to merchandise-wagons. Possibly this is due to our being in a different position because we have a

large amount of traffic moving down to Calcutta: coal moves upwards to Nagpur and wagons return with iron and steel to Calcutta. They are then available for the coal-fields because we cannot work them empty anywhere else.

12. Maximum capacity for export and bunker coal.—*Mr. Clark.*—In 1923-24 we actually handled for the Docks and Garden Reach Depôt 227,000 tons. In 1912 we handled for Bracebridge Hall and the Docks 1,052,000 tons. In 1923-24 we handled for Shalimar 237,000 tons. Then we must add *via* Dock Junction 128,000 tons.

What margin there is for additional coal traffic for the docks depends on the extent of the other traffic which requires to be moved. If there is a large coal traffic for the line south of Kharagpur it occupies the capacity of the single line between Bankura and Kharagpur and leaves less wagons for Shalimar. It would not help coal traffic at present if the Adra-Kharagpur line was doubled or at any rate it is not necessary to have it doubled. We are hoping to make a marked improvement in the speed of transit to Calcutta. We are not satisfied with what we have been doing.

(*To Mr. Legge.*)—As regards the fact that our figure for export-coal works out at only 148 wagons per day throughout the year taking the low wagon capacity of 16½ tons per wagon, it must be remembered that traffic does not move evenly. There is much greater coal traffic in the months February to June when the amount which we move is limited by the amount which we can put through. Later, when we have the capacity to move the coal, traffic possibly does not offer itself. Moreover despatches to the docks may bunch at any time. We could handle as an average for export-coal 3 trains a day or, allowing for Sundays and festivals when wagons are not loaded, say, 5 trains a day. At present the traffic *via* the ferry is limited by the ferry's capacity to 140 wagons a day each way. With the extensions the number will rise to 300 and then the limit will be the capacity of the single line for coal wagons. The 300 will be possible from to-day, we hope, but the staff will have to get into the way of handling the ferry to get the best results. There is a further point that in the busy season other traffic is moving to an unusual extent as well as coal, but it is possible that when we are doing better south of Kharagpur more of our capacity will be occupied for coal traffic in this direction.

(*To Mr. Stuart-Williams.*)—As regards loading open wagons downwards and the necessity for having a certain number of covered wagons at the docks for up-country despatches, with us upwards traffic is of moderate importance. We take a certain amount of general traffic into the docks in covered wagons but do not always have enough to meet the requirements of up-country traffic for covered wagons. With the improvements in the ferry I think that we can get back to the level of the pre-war coal traffic, though you must remember that since that time the amount of our own locomotive coal that has to move to Shalimar has been increased. However, I do not anticipate any difficulty in handling our share of the export coal. There is always the alternative route by the East Indian Railway if our line becomes congested; we do not count on this exactly but it does exist in case of need. We are making use of it now and even 50 wagons a day makes a difference.

(v) Working of sidings.

13. Working of sidings.—*Mr. Bayley.*—We do not have a ten-hour system. I do not consider that such a system would save 24-hours on each wagon. My reasons are as follows:—

If you have a ten-hour system you have to bunch your empties to get them out of the yard in the early morning: probably you will have to keep them lying at the supply base for a good many hours waiting to be picked up by the pilots: that would mean heavy detention at the yards. Moreover, it would mean that all the loaded wagons would come with a rush together into the weighbridge-base and it is quite likely that the weighbridge could

not deal with such rush traffic. For these reasons, I hold that quite probably the time saved in the sidings would be lost in the yards.

There is the further objection that with the ten-hour system the work in the yards would have to be done at night instead of being spread over the twenty-four hours. It would also involve a strain on the section-capacity because we should have to run double the number of pilots. You would save wagon hours in the collieries but lose them, or at any rate lose a lot of the good gained by drawing early; owing to the rush work at the weighbridge-base.

The advantage claimed for the ten-hour system, that the collieries know when they will get wagons, is already obtained under our present system: for the pilots work every day to a schedule and the wagons are put in to every colliery siding at the same time each day, although all the collieries do not get them at the same time.

(To Mr. Legge).—The suggestion that the weighbridge-capacity might be increased so as to avoid the difficulties which I have mentioned does not strike me as sound. You have not only the capital cost of the extensions but the necessity for increasing engine power when you use two pilots instead of one, and besides that you have the increased demand on station capacity and the extra staff that will be needed to deal with your wagons when you bunch your empties and your loaded wagons. At present we arrange our pilots so that they take out the empties as the latter come in: and the empties are delayed for only two or three hours at most for carriage examination and for arranging wagons.

(To Mr. Stuart-Williams).—The introduction of the ten-hour system would not mean that collieries would need less siding capacity because the question of loading of rakes comes in.

(To Mr. Legge).—We do not, as a rule, have any heavy detention of interchange wagons at exchange points though occasionally there is delay. Our biggest delays are at Katras where very often the East Indian Railway are not in a position to receive our trains when they are ready owing to the question of carriage-examination coming in. At Bhaga there were some delays previously but there are not now, while the position at Pathardihi is very much better now and on the average the wagons are being taken over at Pathardihi within 20 hours of our getting them from the colliery. There is, therefore, now no difficulty in getting wagons taken over by the East Indian Railway. Things worked very badly sometime ago but now going smoothly.

Sir George Godfrey.—As regards the proposed revival of monthly meetings on the coalfields between railway officials and representatives of colliery managers, my impression is that none of the managers turned up after the first few meetings and so they died a natural death. I should not have the slightest objection to their revival but I am somewhat sceptical of the benefit that would result.

(vi) Weighment, marshalling and despatch of wagons.

14. **Weighment, marshalling and despatch of wagons.**—Mr. Bayley.—We already make up train-loads of wagons meant for individual steamers at the docks if there are two half-rakes from adjacent collieries.

Mr. Clark.—One method of expediting traffic is to arrange for making up through-trains of 58 wagons which are not to be stopped for wagon examination, etc., once they leave Bhojudih until they reach Shalimar. We have only one such train running now. It avoids the necessity for stopping the train for carriage-examination at Adra and Kharagpur.

Mr. Bayley.—The train runs through on the passenger line and does not go into the yard at all. It may save as much as six or eight hours on the ordinary method.

(To Mr. Bray.)—On the turnround, subject to any delays due to overloading of wagons the system of through-trains would save perhaps three days. Anyhow there would be a considerable saving.

Mr. Clark.—I should prefer not to answer the question definitely until we have had more experience.

Mr. Bayley.—(To Mr. Legge.)—If a rake of wagons for one destination comes into Bhojudih I keep them together unless I am prevented from doing so by there being overloaded or sick wagons. All the wagons that come into Bhojudih do not have to go over the weighbridge in order to get into the marshalling yard. In fact the trains first come into the marshalling yard and then are drawn backwards on to a shunting neck that gives access to the weighbridge.

Mr. Clark.—(To Mr. Bray.)—There is a distinct advantage from the point of view of quicker loading of steamers if the collieries load rakes and half rakes.

(To Mr. Stuart Williams.)—We certainly do not get the wagons across to the docks within two hours of their reaching Shalimar. The whole question is complicated by the general goods traffic as well as coal coming down in bunches for the ferry. You may have traffic waiting when the coal-train comes in and then it has to wait its turn before it can go on to the ferry. I hesitate to commit myself to an answer to the question whether we could bring down coal so as to load direct from wagon to steamer. We endeavour on the transportation side as well as from the point of view of wagon allotment to take notice of coal-wagons being intended for special steamers. I have to be guarded in my reply because I do not see how we can always guarantee to bring down the coal-wagons in time. Information however is sent direct from the docks to the coal manager at Adra and he endeavours to arrange to keep the wagons for the one steamer together. I do not say that we give preference to shipment-coal over coal for the jute-mills but we do try to bring down the wagons for one steamer together. We have train control right through from the coal fields to the docks.

Mr. Clark.—As regards the suggestion that we should have weighbridges at the different collieries we have not discussed who would work them. Presumably they would work the wagons by hand-shunting and probably the railway would accept the colliery weighments, making check-weighments at times.

Mr. Bayley.—I think that we might have our own weighing staff.

(To Mr. Legge.)—Loaded wagons might perhaps gravitate to the weighbridge. Some collieries have such schemes in view now, for instance Jamadoba. Collieries regularly hand-shunt loaded wagons now although they do not like doing it. The possibility of working weighbridges at the colliery all depends on the lay-out of the colliery siding. It is certainly out of the question for the pilot to work the weighbridges. An advantage would be that less adjustment would be needed after weighment.

Mr. Clark.—It would be quite a different matter, as regards working the weighbridge by the pilot, if an arrangement were introduced for loading the wagons from bins.

(To Mr. Whitworth.)—I should not object if the collieries did all the work of weighing and marshalling the wagons in their yards: in fact I should like it. If hand-shunting is not feasible I should have no objection to the shunting being done by colliery engines if the engine could be locked into the siding.

Mr. Bailey.—I do not know of one colliery on our system where a weighbridge could be installed without any alterations in the sidings being necessary but there are 4 or 5 where it could be done if a certain amount of alteration was carried out.

Sir George Godfrey.—The colliery would provide the weighbridge and pay for the staff. The staff would consist of clerks deputed by us; they would have to be railway servants who could be transferred when necessary, for otherwise they would get too much into the colliery-managers' hands. We should make a reduction in the terminals in return for their doing part

of our work. They would soon recover their costs: for example, if they despatched 20,000 tons a month and their terminals were reduced by one anna, they would soon work off the capital cost.

(*To Mr. Whitworth.*)—There would be no objection to a colliery using its own engine. (*To Mr. Legge.*) Collieries would have to do their own shunting for weighing: the pilot could not do it.

16. Maintenance of weighbridges.—*Mr. Clark.*—We do not propose to put in any gravity yards at present. I am not satisfied that they would present any advantages. We have a hump yard elsewhere though not for coal and find that it does not always work successfully.

Sir George Godfrey.—My experience is that they are not very satisfactory. They have not quickened the work of marshalling and the transportation staff do not like them. The reason why they are not successful in India is that the wagons are of different weights and of different ages, some run freely and some do not; thus a grade that suits one wagon does not suit another and this leads to some wagons being sent down too fast and getting damaged. Generally, we find, shunting-engines do the work more quickly. I do not say that this is our final decision but it represents our present attitude.

Mr. Bayley.—We have 7 weighbridge bases in all, not counting Malkera and Khanoodih. We have now three automatics including one which has been installed at Bhojudih during the last two or three days; another automatic is being put in there. Also there will be another automatic installed within a fortnight at the Joint Colliery. (*To Sir R. N. Mukherjee.*)—I am afraid that I cannot give the number of under-loaded wagons. We keep no statistics as to this. Nor can we give any figures as to results in our own collieries from which any deductions could be drawn as to the extent of under-weighment elsewhere because we are not weighing the wagons that go out of our own collieries: the weighbridge has not yet been put in there.

(vi) *Extensions and improvements to depôt yards.*

17. Improvements in depôts yards.—*Mr. Clark.*—The capacity after remodelling of the yard at Malkera which is now 70 wagons per day will be about 230 wagons.

For Khanoodih the present figure is 90; after remodelling it will be 150.

(*To Mr. Legge.*)—The improvements at Mohuda will not relieve Bhojudih yard to any great extent. We have not considered, so far as I know, the possibility of running the wagons in the rough down to some place nearer Calcutta where they would be marshalled, as suggested in the report of the Coal Conference in 1912: I think that the splitting up of the bases is more satisfactory.

(viii) *The 10 hours and 20 hours system of supply.*

18. The 10 hours system.—*Mr. Clark.*—I speak from recollection when I say that the reason why our two largest consumers could not work to the ten hour system was because that system meant that their mechanical plant was out of use during the whole night. They worked with both mechanical and hand-loading: they were Jamadoba and Bhowrah.

(ix) *Overloading and load lines.*

19 and 20. Overloading at collieries.—*Mr. Clark.*—I should not say exactly that the load line did more harm than good but I do not think that the collieries ever bother to test whether it is correct or not for their coal.

Mr. Bayley.—I cannot say how many collieries had to pay overloading penalties but I can say that overloading is very general. We joined with the East Indian Railway in 1919 in offering the formula for calculating the load-lines for different coals. The Indian Mining Federation did not reply at all while the Indian Mining Association, early in 1920, said that they were not prepared to adopt it and raised the question of Mr. Pelly's weighing arrangement. I think that if the colliery managers would exercise the necessary supervision and care the formula would work excellently. I have had a lot

of experience of the coalfields and I certainly do not think that the managers exercise enough supervision over the loading-contractors. I think that there is something in the suggestion that the reason is that the bulk of the loading is done in the afternoon when the manager is in his office and not on the colliery itself.

Mr. Clark.—We could not accept the proposal to remove underloading charges with the idea that this might stop overloading: we could not work a system by which we charged on actual weights without a minimum. As it is there is too much underloading, because the collieries have no strong reasons for loading the wagons fully. The average loading is too low at present as compared with the loading-capacity of our wagons and the railway is definitely losing on this account. Loadings are below the average carrying-capacity.

(To Mr. Legge.)—If the collieries underload the consumer pays the colliery on railway weight and the colliery would not have to make good to the consumer the difference between the actual weight and the minimum charge.

(To Mr. Bray.)—The following is a statement of the various scales of penalties on underloading: our penalties are the same as those on the East Indian Railway.

Penalty charges for overloaded wagons.

1st December 1919 to 30th June 1919	{ 8 per cent. and under free. Over 8 per cent. Rs. 5 per wagon.
1st October 1919 to 9th January 1923	{ 8 per cent. and under free. Over 8 per cent. Rs. 2 per wagon.
10th January 1923 to 28th February 1923.	{ 5 per cent. and under Nil. Over 5 per cent. to 8 per cent. Rs. 3 per wagon. Over 8 per cent. to 10 per cent. Rs. 5 per wagon. Over 10 per cent. Rs. 15 per wagon.
From 1st March 1923 to 31st July 1923.	{ 5 per cent. and under free. Over 5 per cent. to 8 per cent. Rs. 2 per wagon. Over 8 per cent. to 10 per cent. Rs. 3 per wagon. Over 10 per cent. Rs. 10 per wagon.
From 1st August 1923 to 28th February 1924.	{ 5 per cent. and under free. Over 5 per cent. up to 8 per cent. Re. 1 per wagon. Over 8 per cent. to 10 per cent. Re. 1-8 per wagon. Over 10 per cent. Rs. 5 per wagon.

(To Mr. Legge.)—When the percentage of overloading gets bad the scale is altered from time to time. I do not think that the penalties are reduced when the overloading becomes less. I think the alteration in scale has been such as to make it easier for the collieries which do less overloading.

Mr. Bayley.—*(To Mr. Legge.)*—I agree that the collieries have used the load-line as a means of putting the responsibility for overloading onto the railway and that they object to the formula because its introduction would put the responsibility on to the collieries.

Mr. Clark.—I think that the load line is no use.

Mr. Bayley.—When wagons are overloaded we weigh a fair percentage of them after adjustment. We would also reweigh wagons while they were still at the weighbridge at the request of colliery representative, but if the wagons had left the weighbridge we should certainly not bring them back from the marshalling yard.

Mr. Clark.—(To Mr. Whitworth.)—The figures for wagons overloaded at the various weighbridges are given in the following statement.

Percentage of Coal Wagons Overloaded at each weighbridge during 1924.

Name of weighbridge.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Mohuda . . .	5.61	6.60	4.70	10.20	7.36	5.85	8.09	7.21	7.23	6.28	7.3	4.44
Loyabad . . .	14.23	9.30	3.10	7.86	10.8	6.44	11.75	4.60	6.44	7.08	3.55	3.27
Bhaga . . .	9.65	7.15	7.77	6.64	3.55	7.69	7.94	8.33	10.32	8.18	6.55	7.57
Bhojudih . . .	5.19	4.45	2.82	2.76	0.94	2.22	3.73	3.72	5.46	5.54	4.48	3.52
Chaurashi . . .	4.33	5.60	4.88	8.37	5.77	7.19	9.97	6.84	8.25	4.70	3.90	5.37
Radhanagar . . .	3.33	5.20	6.42	5.83	3.51	0.6	4.39	3.07	3.87	3.56	4.78	5.65
Average for all weighbridges.	5.80	6.87	5.61	7.34	4.97	5.08	7.29	6.33	7.32	6.35	5.68	5.12

21. Load line on wagons.—*Mr. Clark.*—Our reply should read “majority of wagons supplied to the collieries” instead of “all wagons supplied to the collieries.”

(x) *Demurrage.*

23. Demurrage.—(*To Mr. Legge.*)—*Mr. Bayley.*—If there are 20 wagons on a siding when a pilot arrives of which 19 are loaded and one has not finished loading the colliery can have the 19 drawn out if they hand over the D-note. We do not leave partially loaded wagons behind unless the manager gives a written request. If one wagon is half-loaded the colliery can have it drawn out and will only have to pay Rs. 5 : if there is any overloaded coal belonging to that colliery lying at the weighbridge they can have the wagon adjusted there.

Sir George Godfrey.—We do not leave the whole lot behind in the siding as a penalty for loading not being completed.

Mr. Bayley.—Leaving the wagons in the siding if the colliery contractor does not hand over the D-note is inevitable unless you are prepared to leave a lot of discretion to the guard. If the pilot comes in when the loading board is up at a siding and the colliery people will not let the wagons go, then he goes on and leaves all the wagons. This certainly involves some waste of wagons-days but there is no remedy.

Mr. Ismay.—The remedy is for the collieries to start loading those wagons first which are on the outside of the siding.

Mr. Bayley.—Such cases however are not very numerous.

Mr. Clark.—If we do not penalise them they are likely to become very much more so.

Sir George Godfrey.—The low percentage of demurrage proves that such cases cannot be very frequent.

Mr. Clark.—There are very few cases of this kind and they do not give us much trouble. Perhaps this sort of thing is more important on the East Indian Railway.

(xi) *Check on delays in transit.*

25. Prevention of delays to wagons.—*Mr. Clark.*—We have as a matter of fact introduced a check on transit between the fields and the docks since we wrote our reply. But it is not actually being worked because no wagons at present are coming down over our line to the docks. They are all going by the East Indian Railway. The check intended is to note the individual numbers of all wagon sent daily from each field and to report the time when they arrive at Garden Reach and are made over at the docks. This will merely be a matter of clerical work in my office, since the Station Masters at Radhanagar, Bhojudih and Chaurashi have sent in their statements.

As regards the statement of one witness that 200 out of 300 wagons were left unweighed at the end of the week *Mr. Bayley* has shown that this is incorrect. The delay is not in the weighing of the wagons but in the receipt of the weightment returns by the Colliery Manager. The reason for this was the diversion of his wagons to the docks *via* the East Indian Railway.

Mr. Bayley.—I shall reply in writing with reference to the wagons going by the Bengal Nagpur Railway direct as to which there is said to have been delay. But if we take the first case on *Mr. Mackie's* list in which he shows 4 days' delay I can prove that the wagons arrived at the yard at 17-40 on the 3rd, were weighed three hours later at 20-45 and left at 8-25 on the 4th. The return was ready at 0-45 on the morning of the 4th and was handed over to their weighbridge clerk at 7-40 on the morning of the 5th because he did not come earlier. I can identify the wagons because only one pilot is drawn each day.

(*To Mr. Legge.*)—*Mr. Bayley.*—The out-door supervision on the collieries is exorised by myself, the Assistant Traffic Superintendent at Bhajudih, the Weighing Supervisor, the Traffic Inspector and the Assistant Inspector. The

Assistant Traffic Superintendent is continually visiting the collieries: he has a motor trolley and is out at the collieries, certainly, two or three days a week. He has to pass the various colliery sidings to get from one colliery to another and he watches the wagons being loaded.

The Traffic Inspector has a trolley and goes round quite twice a week: the Weighment Supervisor goes round at intervals; and the Assistant Inspector is continually out with the pilots.

Sir George Godfrey.—It is difficult to deal with indefinite complaints of this kind. The District Traffic Superintendent may be doing much more good by sitting in his office exercising general control over the more important work of distribution and punctuality. Beyond fairly frequent general inspections we would not expect him to go round checking the sidings.

Mr. Bayley.—When we do go to the colliery-siding nine times out of ten we do not see the colliery manager. He is very rarely there except when we make an appointment to meet him.

Sir George Godfrey.—Much the most effective way of watching train-work and pilot-work is by doing it on paper. Personal visits are not nearly so effective though they are quite all right when you have to talk over any practical difficulty. They should not be done for the mere sake of talking. I imagine the feeling that the railway staff are not doing enough inspection is one that grows up owing to managers on the colliery not knowing when the district and assistant officers are about.

(xii) Co-operation of collieries.

26. (b) **Co-operation of collieries with the railway.**—*Mr. Bayley.*—The complaint of the collieries that covered and loaded wagons are inter-mingled so that they cannot be loaded in groups for up and down the line is to a certain extent true. It is difficult to marshal wagons for supply with open and covered wagons separate for 6 or 7 collieries on one pilot.

(c) *Mr. Clark.*—Our written reply, I am afraid, misses the point of the question: the collieries do load haphazard.

Mr. Bayley.—It is sometimes merely a question of how they put on the labels.

Sir George Godfrey.—This does not make much practical difference to us. The wagons have to be weighed and some have to be cut out anyhow. It is of importance when big lots of wagons have to be dealt with.

Mr. Bayley.—We cannot arrange to group all the opens and all the covered wagons together on the pilot so that the guard could put a few of each together into each siding. The pilot would get the empties and the loaded mixed up together.

(xiii) Wagon supply.

28. **Supply of open wagons only to particular collieries.**—*Mr. Clark.*—It is correct to say that the introduction of the pooling scheme has reduced the work of marshalling to a certain extent.

Mr. Bayley.—I think that we might say “to a considerable extent.”

Sir George Godfrey.—With reference to our reply (b) to 67 we recognise that we cannot expect collieries to instal mechanical loading appliance unless a regular supply of suitable wagons is forthcoming but we cannot guarantee a regular and sufficient supply of open wagons while the pooling scheme continues. This scheme was introduced to effect an increase in the available wagons but has resulted in a conglomerate supply of different types of wagons at the collieries. There is no chance of supplying open wagons only for the collieries equipped with mechanical loading plant so long as the pooling scheme continues.

(To Mr. Legge.)—Mr. Clark.—It would be no solution to mark all opens N. P. because you could still be receiving non-N. P. wagons from other railways.

Sir George Godfrey.—By the time that the docks are equipped with mechanical appliances it is possible that the railway will have enough open wagons to keep them going.

Mr. Clark.—I think the result of attempting to supply open wagons to collieries with mechanical plant would be that you would have covered wagons standing idle and at the same time would be getting complaints that you were not supplying enough wagons to meet indents.

Mr. Bayley.—If you had stabling in the colliery-sidings some collieries would get more than their fair number of wagons.

(To Mr. Legge.)—Sir George Godfrey.—If it is a question of supplying open wagons only for coal to be loaded for the docks I dare say that we could manage it. Under the present system I say that neither the East Indian Railway nor the Bengal-Nagpur Railway could guarantee open wagons only for all collieries equipped with mechanical appliances.

Mr. Clark.—To attempt to do this would mean a great deal of unprofitable work.

Mr. Bayley.—There are about 40 mechanical loading appliances at collieries on our system.

Sir George Godfrey.—The suggestion that in the interchange system open wagons should be supplied in exchange for open and covered for covered raises the question whether other railways would have sufficient open wagons. Presumably a certain number of opens would be needed for the movement of coal from Bombay port for example.

Mr. Clark.—As it is we have had a shortage in covered wagons at the docks for loading back; recently we had to work up covered wagons from Kharagpur to the docks to meet the demands of sugar traffic. The use of open wagons only for coal would lead to greater expense in handling our coal traffic because covered wagons received near Calcutta would have to be returned, empty instead of loaded with coal.

29. Double wagon supply to collieries with mechanical loading.—Sir George Godfrey.—If we gave an extra supply to such collieries we should not necessarily lay ourselves open to accusations of unfair treatment, if the collieries could load quickly enough, say in 1½ hours. It might lead to complaints if a system of distribution of wagons were in force, but it must be remembered that any arrangement by which the collieries could load as quickly as that would involve upon them a considerable expenditure of money. If you calculate the interest on capital and sinking fund, it would all mean an additional charge on coal.

(To Mr. Whitworth.)—I agree that the solution of the double wagon-supply difficulty is to have increased siding capacity. But even then the collieries might not get the full supply because the wagons might not be sufficient.

32. Objection to issuing several railway receipts for rakes and half rakes.—

Sir George Godfrey.—It seems to me that the advantage was given to the colliery in return for the advantage gained by the railway of simplicity in working. The rake-system was introduced with the idea of getting a large amount of coal away quickly to the advantage of both the railway and the colliery but so far as our system is concerned it has not affected either side very greatly. As regards the point whether in the first line of our reply the word should be consignee or consignor, I looked on the question as one of convenience for, the man who sends away, say, 25 wagons to one destination and at the destination splits them up. But the matter is not very important and if there is any special reason for doing so we can manage to introduce the change.

(To Mr. Legge.)—It is very probable that the reason why small collieries are anxious for this is that a railway receipt is a negotiable instrument and the consignee wishes to be able to sell it.

(xv) *Sidings.*

34. Applications for sidings.—*Mr. Bayley.*—We can let you have a statement showing the total siding accommodation in terms of number of wagons.

Sir George Godfrey.—As regards the number of applications for sidings that we have on hand, the delay that takes place in sanctioning many of the sidings is due to causes which the railway cannot control. In particular there were two or three sidings asked for by the Indian Mining Federation which raised a big question as involving great expenditure either by the East Indian Railway or the Bengal-Nagpur Railway: the matter was referred to the Railway Board who finally sanctioned the scheme and it is being carried out by the Bengal-Nagpur Railway. Great delay occurred but the cause was the necessity of a reference to the Railway Board. I refer to the Behmandih-Karkaree siding.

I do not think that it should be possible to allow sidings to be put in as private sidings with the idea that they would afterwards be taken over by the railway if they justified their existence: very few people are prepared to put down the money for installing the permanent way and there are also cases when we see that the sidings would interfere with train working. I do not think that the railway would refuse to take over a siding if it were a profitable one. To secure safety we should have to build it and charge for it. There are many complaints when we feel that we have good reasons against putting in sidings. There is one case where the colliery people have to cart coal to a station at a cost of perhaps eight annas a ton: they think that a siding would be cheaper but we see that we should not be able to recover our expenditure: for it is impossible to charge extra as a special case because the Railway act forbids it. We have only one private siding on our system and that is a relic of the old days. Most of the private sidings were converted into assisted sidings but this particular company refused to fall into line.

Sidings are often asked for by irresponsible people in impossible positions and we could not agree to them if they interfered with the working of a piece of the line. We do not often refuse merely because of the cost that will be involved: our reason is that we do not believe in the property or that the siding would be inconveniently placed. I know of at least twelve sidings which have been a loss to us. I get a progress report put up to me showing what is happening to applications.

35. Number of sidings.—The actual siding accommodation for wagons at collieries situated on our system is as follows:—

(a) Jharia coalfield, excluding B. N. and E. I. Railways	
Joint Colliery and G. I. P. Railway Kargali	
Colliery	3,330
(b) Radhanagar field	851
(c) Chaurashi field	545
	<hr/>
TOTAL	4,726
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(xvi) *Preferential wagon supply for export and Bunker Coal.*

36. Possibility of preference being conditional on not overindenting.—*Mr. Clark.*—The only way to prevent collieries from sending down to the docks more coal than is needed for shipment would be to fine them wagons if they overindent: it would not be a nice thing to do but it would be the only way, I think.

Mr. Bayley.—I should let indents be governed by the authorisation. They do not overindent as a rule for authorised supplies.

Sir George Godfrey.—Any preferential supply would be contingent upon some one giving a certificate that preference is needed. That certificate could be used to prevent overindenting.

(*To Mr. Legge.*)—*Mr. Clark.*—If there were no Coal Transportation Officer and the Port Commissioners gave a note of total tonnage to be loaded we could convert it into wagons but there would be difficulties about subdivision among different collieries.

Sir George Godfrey.—I see no real difficulty. We should not be working to a margin of a few tons. With a 6,000 ton boat there would have to be a margin of 200 or 300 tons of course. There is no stopping the collieries from taking advantage of this to bring down some coal which would eventually be transferred to their own mills but it is not worth worrying about.

(*To Mr. Bray.*)—*Sir George Godfrey.*—The case quoted in which, owing to the failure of information about 1,000 tons of coal which were due to be despatched by the B. N. Railway for shipment, another 1,000 tons were ordered from a colliery on the East Indian Railway probably occurred during the last seven or eight months when there were physical causes for my railway not being able to move traffic easily to the docks. If the coal were shipment coal the colliery manager should have told the Coal Manager at Adra about it and should have asked him for special help to get the coal down by a particular date. The Coal Manager is not likely to know about a thing of this sort until too late unless the manager tells him. We come up against the question of preferential wagon supply here as well as of preference in transport, such as is possible. Not much can be done as far as preference in transport goes; you cannot stop trains in order to let special trains pass them, if there are a number of them going along a line one behind another.

Mr. Bayley.—If the Colliery Manager rings my office up we can give them all information available by 10 or 11 each day.

Mr. Clark.—We cannot "guarantee" wagons for coal because we cannot even "guarantee" the punctual running of our passenger trains. But you will find that the railways are improving very largely and this improvement is bound to continue.

Sir George Godfrey.—I should like to see a system of preference to shipment-coal right through. This would be to the interest of the whole coal trade and not only of the one person who is making the shipment.

Every person connected with the production of coal ought really to be interested in securing some means for re-establishing an export business. Even the small collieries who may not have any prospect of exporting coal ought to realise that some second and all third class coals will be shut out of business entirely unless something can be done:

- (a) to increase the total demand for coal,
- (b) to increase the internal consumption to something substantially more than 19 to 20 million tons,
- (c) to absorb the increased production of some 3 to 5 million tons, already almost in sight, and
- (d) to counteract the drop in price of coal consequent on excess production.

Therefore even the man who has no immediate prospect of becoming an exporter should be prepared to assist in a general scheme for re-establishing an export business. The first step is to get the Indian Mining Association and the Indian Mining Federation to agree together on the importance to the whole coal-trade of India of extending exports. Then if they agree on this broad point, they must go on to appoint a joint board or amalgamated Coal Chamber which could put up a Committee to deal with the whole question. The Committee would employ a Superintendent stationed in

Calcutta who would obtain from his inspecting staff all over the coalfields information as to any coal intended for shipment, including the seam, the colliery and the date of despatch: the inspecting staff would also inspect the loading of shipment coal. The Coal Chamber's Committee would have to be entitled to issue notices to Railways of steamer-loading programmes week by week and to demand special assistance amounting to special treatment for coal required for particular steamers. In this connection the railways would have to allow wagons up to a reasonable number to stand at the docks under load at a special demurrage rate which might be the same as the Conference rate for each day over and above the free time. A six thousand ton ship would only need 350 wagons of coal and if half of these wagons were down two or three days before the vessel arrived and the others were coming down regularly behind them, I do not think that more than half the whole number would come under demurrage. Suppose that they were under demurrage four days, that would mean four annas a ton, five days would mean five annas and so on, while, as against this extra expenditure, the shipper would be able to get better terms for freight and would save the Port Commissioners' normal charge of three annas for dumping. The Superintendent in charge under the Coal Chamber could give a certificate showing the Colliery from which the coal came and the Committee could grade the coal and give a grading certificate which would be called the Amalgamated Coal Chamber's Certificate of Quality.

The Superintendent and his Staff would be paid by the coal trade as a body on the basis of a very small charge on every ton of coal sold by all Collieries in Bengal, Benar and Orissa and it would be essential that they should be highly paid. This is an outline of a scheme which could be worked if the Indian Mining Association and the Indian Mining Federation would see eye to eye: until they can do so it would be a mere waste of time to elaborate the details of it.

I do not think that it would be a good thing to use the Chief Mining Engineer and his staff instead, because that would involve Government interference in what is purely a trade business, but Government would have to make the admission that the authority of the Superintendent was good enough to authorise the railways to give preference.

For shipment coal the proposed Board would do all that the Coal Transportation Officer now does. They could derive their powers from the Government of India in the Railway Board by executive orders if the two bodies combined to express a desire for them: but the Government of India will not give them if there is any opposition. (*To Mr. Bray.*)—My attitude is that I favour a Grading Board, but I prefer that it should be one controlled by the Trade. I do not think that the scheme proposed by the Indian Mining Association would be the right way to get grading done. You must have an executive man who is experienced and knows the coal seams: the actual work must be done by an expert who could justify his actions to the Committee; it could not be done by a Committee. Certainly a Board such as is proposed by the Indian Mining Association should be empowered to give directions for preference to the railways.

39. *Possibility of preferential supply being cumulative.*—*Mr. Clark.*—Mr. Bayley was not present when the reply to this question was drafted and he agrees with the views of the East Indian Railway. We should like to modify our reply accordingly.

(xvii) *Coal Transportation Officer.*

40 and 41. *Value of Coal Transportation Officer to railway.*—*Sir George Godfrey.*—I do not agree that the Coal Transportation Officer now does work which ought to fall on the railways, for the reason that his main work is to give preference. I agree that he is the outcome of a disease.

Mr. Clark.—At the present moment the disease does not exist.

Sir George Godfrey.—I do not know if we can say that we have emerged from our difficulties. From time immemorial the railways have been prophesying that their difficulties will disappear soon, but they have not, up-to-date. However, I do not think that two years hence there will be much difficulty about the wagon-supply, although in the busy season there will always be some shortage, even if it is not serious enough to justify the Coal Transportation Officer's retention.

We must have some central authority to know where the coal is coming from for each particular ship. otherwise the collieries might ask for supplies for shipment from both the railways. If the Indian Mining Association and the Indian Mining Federation do not combine nothing can be done: but within a year from now there will be three to five million tons more of coal available on the market and this cannot be absorbed unless that market expands: the alternative to their combining is that the small collieries will have to shut down.

Probably we could arrange a system of preference to the export trade if we were authorised to do so.

Mr. Clark.—I think that the question of preference for export-coal was discussed in 1912 by the Indian Mining Association.

Sir George Godfrey.—With the increased amount of coal on the market in two or three years I do not see that there will be any great need for the Coal Transportation Officer, because the coal will not be wanted. But if no other authorising authority is appointed such as the Committee which I suggest, I should like to see the Coal Transportation Officer retained.

Mr. Legge to Mr. Clark.—It is easier to supply a rake than 50 wagons split up between several collieries. The Coal Transportation Officer does contribute to a quicker turn-round of wagons but how far so would be difficult to say.

Sir George Godfrey.—I do not approve of the idea that preference should be given to loco. coal and shipment coal, etc., and that the remaining wagons should be distributed to the collieries *pro rata*. At the moment there is no necessity for giving preferential supplies of wagons to industrial concerns all over India. The Coal Transportation Officer or some authority would be of great use in deciding what shipment-coal should be given preference. He would also be useful if his duties were limited specially to shipment-coal, because he could keep the Coal Manager advised about the urgency of shipments and because the shipper could go to him for information. He could watch how wagons were held up at the docks and how the scheme was working generally.

Mr. Clark.—The East Indian Railway's statement is correct. There might be other goods which stood in greater need of preference than coal.

(xix) Opening of steamer berths.

43. **Opening of steamer berths.**—*Sir George Godfrey.*—One week is not enough at present but ought to be.

Mr. Clark.—We would sooner have a fortnight of course.

Mr. Bailey.—Very often we only get four days.

Mr. Clark.—We might have said in our written reply "not less than a week."

(xxi) Demurrage at the docks.

47. **Recovery of demurrage from Port Commissioners.**—*Sir George Godfrey.*—The demurrage leviable at the docks from the Port Trust Railway is the same as the Conference rate for interchange between Railways. But in my suggestions about preference to shipment-coal I was comparing this rate with the ordinary rate as between Railways and the Public, i.e., one anna per ton of wagon carrying capacity per hour, a rate definitely intended to secure the rapid release of loaded wagons.

(xxii) *Railway freights and terminal charges.*

56. **Seasonal rates.**—*Sir George Godfrey.*—There is no question of a slack time on our railway. We have no slack season. There is less coal at certain seasons than at others, but we have other traffic in place of it, manganese, dolomite, iron ore to the steel works, limestone, etc., whether the rains are on or not. There is no scope therefore for seasonal rates on our railway.

(*To Mr. Legge.*)—We know that we should lose if we introduced seasonal rates because there is no chance of compensating the loss by filling up the deficiency of traffic. There is practically no deficiency of traffic to fill, so Mr. Banerjee's suggestion that we should try and see cannot be adopted.

57. **Rates and terminals for loco. coal.**—*Sir George Godfrey.*—Undoubtedly we are losing on the transport of coal for other railways.

58 and 59. **Payment of terminal charges to Port Commissioners.**—*Sir George Godfrey.*—In my opinion the terminal charge at the Kidderpore docks is very high. The Port Commissioners charge terminals because they are doing the work which the railways should have done, and that is legitimate. But the big increase of two years ago was not justified on its own merits: they merely said that they must balance their budget somehow.

(*To Mr. Legge.*)—I think that in theory the terminal on coal should be reduced, because it is a commodity of low value which cannot bear high rates as compared with more valuable merchandise.

(xxiii) *The rebate on coal and its effects.*

60. **Effects of export-coal rebate.**—*Sir George Godfrey.*—I do not support the idea that there should be a rebate on coal sent to Bombay by the rail route. Under present conditions I am much more anxious to encourage coal coming down to Calcutta. The rebate on coal to Bombay is open to the following objections:—

- (1) It would accentuate the wagon difficulty;
- (2) It would leave no room for other and better paying traffic if coal-traffic increased to any great extent on the Bombay route, while the better paying traffic is merchandise which must be moved.
- (3) It would lead immediately to a demand from other places short of Bombay for a similar rebate.

I should certainly differentiate between export and bunker coal in the matter of rebates. Export coal needs assistance, but steamers have to bunker at Calcutta whether the coal gets a rebate or not. One reason why bunkering has fallen off is probably that the ships utilise space, in which they might put bunker coal, for loading other cargo and fill up again at Colombo.

Mr. Clark.—It would be interesting to know to what extent bunker coal has fallen off.

Sir George Godfrey.—You have to consider not only the total figures but the number of vessels using the port. In 1918, 1919, and 1920, when ships were coming in freely, nearly two million tons of coal were put into bunkers. The figure for bunkers has fallen off since but that is perhaps due to the general falling off of trade.

(*Mr. Whitworth.*—Those were years when ships were getting a very good mixture of coal from the docks. To my knowledge several lines which used to bunker here now bunker at Colombo: the Japanese ships do that.)

I think the reason why the Japanese coal at Colombo is that they could not get the coal which they wanted here and have now got into the habit of taking it elsewhere.

Apart from the extra cost of railway freight you have the increased expense of ground rent, of labour and of hire of boats, all affecting the bunker trade. From depôt to bunker now costs Rs. 3 a ton as against Rs. 1-8-0 pre-war.

61. **Payment of rebates.**—*Mr. Clark.*—The suggestion to which we refer at the end of our written reply to this question is likely to be adopted: it is only a matter of arrangement.

62. **Rebate versus concessional rate.**—(*To Mr. Legge.*)—*Mr. Carroll.*—If we reduce the rate on coal to the docks, we might have difficulties under the differential rule, which people would try to use to drive down other rates: so rebates are a protective measure for the railway.

(xxiv) *The working of the coal depôts at Howrah and Shalimar.*

65. **Coal depôts rents.**—*Mr. Clark.*—(*To Mr. Legge.*)—Besides depot rents we levy a terminal charge of Re. 0-4-6 a ton. The whole of this goes to the Port Commissioners, and to the East Indian Railway which have to work the coal over the branch

Mr. Clark.—We admit that we lose on these depôts, but if we do not keep them and so get the traffic to the depôts, we should not get the coal coming down over the main line.

Sir George Godfrey.—The East Indian Railway supplies loco power for Shalimar. If we did not provide the depôt we could not carry any bunker coal at all for the collieries which we serve.

(xxv) *General recommendations.*

67. **Suggestions for quickening coal transport and stimulating export of coal.**—(1) *Mr. Clark.*—The obstacle that prevents the loading of complete trains from one despatcher to one destination is that few concerns want to handle as much as a whole rake at once: the big collieries send away a rake at a time for shipment purposes and the big steel-works want rakes but otherwise they are not really required.

(3) *Sir George Godfrey.*—The supervision of sidings to prevent pilferage of wagon parts is a matter for the collieries: we cannot possibly arrange it. If we put in two watchmen on every colliery, it would be very expensive, not to mention that there would be always friction with the colliery staff. It is a matter which ought to be taken up by the collieries. (*To Mr. Bray.*) The type of thing that is stolen off the wagons is axle box covers, oiled waste and vacuum pipes, the latter are used as water bottles on the coal-fields.

(4) The provision of vacuum brakes has been accepted as important by the Railway Conference Association.

(5) In my opinion there is probably too much train examination at present. We are reorganising the system.

(xxix) *Coal traffic via Waltair.*

71. **Wagons made over to Madras and Southern Maharatta Railway at Waltair.**—*Mr. Clark.*—I put in a statement showing how many wagons we are actually handing over at Waltair. We have had a serious epidemic of illness during the last three months or more down that section on the east coast and this has handicapped the movement of traffic seriously.

Wagons made over by B.-N. Railway to M. and S. M. Railway at Waltair.

Month	Total handed over.			Daily average.		
	Loaded.	Empty.	Total L. & E.	Loaded.	Empty.	Total L. & E.
January 1924 . . .	2758	148	2906	89	4	93.24
February 1924 . . .	2274	79	2353	79	2	81.4
March 1924 . . .	2845	109	2954	92	3	95.9
April 1924 . . .	2849	122	2971	95	4	99.1
May 1924 . . .	2877	150	3027	93	4	97.20
June 1924 . . .	3023	85	3108	101	2	103.18
July 1924 . . .	3272	101	3373	105	3	108.25
August 1924 . . .	3488	125	3611	112	4	113.15
September 1924 . . .	3508	108	3616	117	3	120.16
October 1924 . . .	2859	115	2974	92	3	95.29
November 1924 . . .	2244	96	2340	75	3	78.00
December 1924 . . .	2642	84	2726	85	2	87.29
January 1925 . . .	3018	65	3083	97	2	99.14

Sir George Godfrey.—I think it would be an excellent thing if the Railways deputed Coal Traffic officials to the docks to learn the practical difficulties which are experienced there, and if in return the docks deputed one of their men to go up the coalfields and get practical experience of our difficulties. It would be a valuable and interesting training for the men, though I do not think that it could result in any great improvement in traffic working, but the interchange of knowledge must in itself be useful.

(ii) Eastern Bengal Railway.

Colonel G. R. HEARN, C.I.E., D.S.O., Agent, Eastern Bengal Railway.

WRITTEN STATEMENT.

1. East Indian Railway running-powers to the docks.—Coal traffic to the docks is carried in trains of the East Indian Railway, which has running-powers over the Eastern Bengal Railway between Naihati and Kidderpore Dock Junction.

2. Average time taken by coal-trains between Naihati and the docks and vice versa.—(a) The average time taken by the East Indian Railway down coal-trains is about 3 hours between Naihati and docks against an average booked time of 2 hours.

(b) The average time taken by the East Indian Railway up running-power trains from the docks to Naihati is about 2 hours 15 minutes against an average booked time of 1 hour 45 minutes.

3. Special difficulties in working goods-trains between Naihati and the docks and vice versa.—The main difficulty in connection with the working of the dock-traffic lies on the section between Ballygunge and Majerhat. The quadruple lines at present end at mile 5 B, just south of Ballygunge station. From mile 5 B there is a double line, except at the entrance to Majerhat station. This double line has to deal with both running power and Eastern Bengal Railway goods-trains and also with the Budge-Budge Section suburban passenger service. The running-power trains do not suffer so much detention as the Eastern Bengal Railway trains, which run on the passenger lines all the way from Calcutta. No down goods-trains can leave Ballygunge till line-clear is obtained right through to Majerhat.

The question of the extension of the quadruple lines from mile 5 B depends on the final situation and lay out of the Port Commissioners' new marshalling yard for the docks as, until these are fixed, the question of the approach lines from the Eastern Bengal Railway to the yard cannot be settled.

The facilities from Naihati to mile 5 B are more than adequate. In fact the remuneration received by the Eastern Bengal Railway from the East Indian Railway for the working of the latter's running-power trains over this section does not cover the interest on capital and maintenance charges of the section. This fact will have to be borne in mind when considering any proposal for reduction in rates of freight on coal traffic for the docks. Under present conditions, this railway is not in a position to bear any loss in revenue which might be caused by a reduction in rates.

4. Special difficulties preventing the quick turn-round of engines and rolling-stock between Naihati and Bandel.—The difficulties on the Naihati-Bandel Section from the Eastern Bengal Railway point of view are chiefly due to delays by the East Indian Railway in clearing loads for the East Indian Railway from Naihati, and to all East Indian Railway down-trains into Naihati being received unmarshalled. Naihati yard is not big enough to meet these conditions. Relief may be given by a project to connect Azimganj and Bhairamara.

5. Suggestions for expediting transit stock between Naihati and the docks.—The quadruple line should be extended to Majerhat (see paragraph 3 above). Ballygunge yard is being remodelled and the question of remodelling Majerhat has been taken up.

It is also proposed to introduce Train Control on this section.

A hump marshalling yard is needed at Naihati to meet the difficulties mentioned in my answer 4 above.

The East Indian Railway have been asked to arrange for engines to run through to Naihati with the trains that enter Naihati yard as it is hoped that this will tend to more prompt clearance of up loads.

It would also assist if the East Indian Railway trains can bring in loads separately marshalled for north and south traffic and at more regular intervals.

(*Oral Evidence—January, the 23rd, 1925.*)

1. East Indian Railway running-powers.—The total paid by the East Indian Railway to the Eastern Bengal Railway for running-powers in 1923-24, including running-powers to Chitpore and Sealdah as well as those to the Kidderpore Docks, was Rs. 1,87,955. They pay Rs. 1-8 per train mile for Chitpore and Sealdah and 12 annas per train mile for trains running to the docks. For light engines they pay nothing and the Eastern Bengal Railway gets no credit for shunting or marshalling at Chitpore or Calcutta. The East Indian Railway do their own delivery at the docks.

I should go further and say that these rates are quite inadequate. They were settled long ago and the question of their revision has come up two or three times. The East Indian Railway Company said that they could pay no more and we gave in because, we thought, the receipts all went more or less into one budget. Now that they have become a State Railway I have denounced the agreement and we shall now have to settle what the true rate should be. On my figures if they had paid their proper proportion of capital costs and maintenance (excluding the cost of station-staff and signalling) we should have been paid Rs. 75,000 more on Dock Traffic than we were last year. The fact of the case is that they can now quote a rate at our expense: the rebate that they give on export coal is really at the expense of the Eastern Bengal Railway.

In arriving at this figure we have taken the capital cost of the double line between Naihati and mile 5 B on the Budge-Budge branch: then we have taken the total number of trains running over this line to Chitpore, Sealdah and the docks and we have charged proportionately to the East Indian Railway and the Eastern Bengal Railway. If they are going to cover the loss, i.e., proportion of interest on capital and maintenance, they ought to run another 3,090 trains a year to the docks. Seeing that they ran in the year 1923-24 only 3,808 trains to the docks, they would have practically to double their present traffic if they were going to pay interest charges and maintenance.

They pay for empty trains running back, but I have included this in my calculations.

4. Special difficulties preventing quick turn-round between Naihati and Bandel.—When the Bally bridge is built the trains will come in much further down. As regards the difference that the bridge will make I do not think that Naihati delays the dock trains to any great extent because they run right round it: the only delay is that due to a certain amount of congestion. But the dock traffic amounts only to $7\frac{1}{2}$ trains each way per day, while the capacity of our line is tremendous. Of course, there are restrictions over the Jubilee Bridge, but it seems rather extravagant to put in a new bridge merely to deal with $7\frac{1}{2}$ trains each way per day. The existing difficulties, I am told, are much more at Bandel. The congestion is due to the Jubilee Bridge but I cannot believe that something could not be done to improve it or that the engineers could not make a better bridge there. If this is impossible there would be some relief gained by the project to connect Azimganj and Bhairamara: that would mean another bridge, but a much smaller one, over the Bhagirathi and it would not be a very serious matter.

5. Transit between Naihati and the docks.—Among the improvements which I suggest is the provision of a hump marshalling yard at Naihati. We shall take this up when we have time to examine it: we have not worked

out a scheme yet because we have so much to do in other directions. The yard was remodelled, I think, in 1913 or 1914, long before my time. Certainly it wants remodelling now, but with all the existing difficulties we do 2,000 wagons a day. As regards our request to the East Indian Railway to have their engines run through to Naihati, negotiations are going on: all these things of course take time. They say that the Jubilee Bridge would not stand the weight of their engines. This part of my reply refers to trains which enter Naihati yard and which we have to break up; all the East India Railway running-power trains go round the yard. I should explain that the line between Naihati and Bandel is worked as a shuttle service. The engine bringing down a train for our line is cut off at Bandel where a shuttle engine is put on. Our idea is that, instead of blocking Bandel while they take off the engine and put on a shuttle engine, they should run straight through: and their objection is the heaviness of their engines.

The East Indian Railway consider that, when they pay a contribution towards Naihati yard and when expenses are continually going up, the work of marshalling trains should be done at Naihati yard and not by them: that is one way of looking at it, but their suggestion is obviously not for the general good. I admit that it is not a good yard, but it is unnecessary to go into technical details.

The building of the Bally Bridge would quicken up the movement of traffic between the coalfields and the docks. The bridge would be so far down that unless trains from it are taken to a proposed yard eight miles out of Calcutta on this side of the river every train passing over the bridge would have to be marshalled and run straight through to destination. That is if we are to cease marshalling at Sealdah and Chitpore. The latter was desired by Committees in 1920 and 1923. The bridge is too near Calcutta to allow of other trains being broken up on this side. It will only help the dock trains and as I have shown that means a very small portion of the traffic. The Bally Bridge would carry only 7½ trains each way per day, because all other trains that come in with running powers would have to be split up and so could not use it.

As regards the suggestion for doubling the Jubilee Bridge and putting a flying bridge over the Naihati yard I do not think that the yard gives any trouble. The only trains that I have seen hung up were detained owing to the inability of Bandel to receive them. The reason given to me was that Bandel commonly could not take anything till 8 A.M.

(iii) East Indian Railway.

G. L. COLVIN, Esq., C.B., C.M.G., D.S.O., Agent, East Indian Railway.

(WRITTEN STATEMENT—12TH JANUARY 1925.)

(i) Staff.

1. **Organisation of staff for coal traffic.**—The principal coal areas served by the East Indian Railway are the Jheriah and Raneeungunge fields. For the purpose of railway operation each of these fields is a separate district under the charge of a District Superintendent with headquarters at Dhanbad and Asansol respectively.

Each district is divided into depôt sections served by a depot station and each depôt section is again divided into several pilot sections. The pilot section is, roughly, a group of sidings worked by a single pilot.

The supply and clearance of wagons and the movement of traffic on the district, i.e., all traffic transportation work, is under the control of the District Superintendent who has assistant officers and a large office staff. He has also several District Inspectors who maintain out-door supervision on the work of the traffic transportation staff of the district.

The depôt stations are in the charge of senior subordinate officials who are responsible to the District Superintendent, for the work of receiving trains of empty wagons, breaking them up and re-forming them into loads for each pilot section according to the advices issued daily by the District Superintendent.

Pilot guards take out these empty loads to their sections and distribute the wagons at the various sidings according to the instructions contained in the supply memoranda forwarded by the district office. After the wagons have been loaded, they are removed by the pilot guards and brought to the depôt stations, where under the direction of the yard master they are weighed, marshalled and despatched.

Each yard master has three assistants, who work 8 hours each, with sufficient clerical and menial staff to relieve them of the purely routine work of yard operation, thus enabling them to devote their time to supervision of wagon and train movements in the depôt stations. The movements over the district are controlled by Train Controllers.

The District Superintendent maintains a very close check over the work being carried out on his district, by means of telephone communication.

There is also a Traffic Commercial Officer, the District Traffic Manager, "Coal," Dhanbad, who superintends the weighing, charging and invoicing of coal traffic and all like matters. This officer has jurisdiction over both coal districts in all matters commercial and works in close touch with both District Superintendents.

The duties of these three district officers are centralised in the Coal Manager at Calcutta.

A chart showing the organisation of the staff is given as Appendix A.

It is proposed shortly to introduce a Divisional Scheme on the East Indian Railway, when a Divisional Superintendent will be posted to Asansol. This Officer will be responsible for the entire transportation work now vested in the District Officers of the several departments stationed at Asansol and Dhanbad, and it is anticipated that the reorganisation will make for more efficient working.

(ii) General questions of wagon supply.

2. Total amount of coal transported.—

Statement showing weight of COAL traffic carried during the years 1912—1924.

Calendar years.	January to June.			July to December.			Total for the year.		
	Upwards.	Downwards.	Total.	Upwards.	Downwards.	Total.	Upwards.	Downwards.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1912	2,025,722	2,877,658	4,903,380	1,984,001	3,163,848	5,147,749	4,009,814	6,041,306	10,051,120
1913	2,228,236	3,236,709	5,465,005	1,915,023	3,116,310	5,031,333	4,143,259	6,353,079	10,496,338
1914	2,129,110	3,113,546	5,242,655	2,338,094	2,955,703	5,293,797	4,467,204	6,069,260	10,536,464
1915	2,624,530	2,502,344	5,126,874	2,410,424	2,784,496	5,204,920	5,043,964	5,598,840	10,642,794
1916	3,421,285	2,710,707	6,140,992	3,191,820	2,547,823	5,739,643	6,613,105	5,267,530	11,880,635
1917	3,754,817	2,747,404	6,502,221	3,301,835	1,843,491	5,245,326	7,056,052	4,609,065	11,747,607
1918	3,920,160	2,239,009	6,159,228	3,369,843	2,704,045	6,074,788	7,290,002	4,944,014	12,234,016
1919	3,522,241	2,575,603	6,097,844	3,309,013	2,621,106	5,930,119	6,921,256	5,196,709	12,117,965
1920	3,190,101	2,754,235	5,944,336	3,154,483	3,234,029	6,388,512	6,363,584	6,088,264	12,451,848
1921	2,818,433	3,179,700	5,998,133	2,814,001	3,010,698	5,824,699	5,632,454	6,190,393	11,822,847
1922	2,187,950	2,065,887	4,253,837	3,110,828	3,018,918	6,129,746	5,298,773	5,084,165	10,382,938
1923	3,007,709	2,955,148	5,962,857	2,898,080	2,781,535	5,679,615	5,995,859	5,700,683	11,702,542
1924	3,518,647	3,202,069	6,720,716	3,483,138	3,196,436	6,679,574	7,001,785	6,300,105	13,400,890*

The years 1921, 1922 and 1923 were affected by strikes and floods respectively. The first strike was from 18th December 1921 to 6th January 1922, and the second strike from the 2nd February 1922 to the 24th April 1922. The floods of 1923, which occurred near Arrah station, entailed the stoppage of traffic and the restrictions remained in force from 20th August to 23rd September 1923.

* November and December figures are approximate.

3. Number of wagons supplied to coalfields.—

Statement showing the number of wagons loaded with COAL during the years 1912—1924.

Calendar years.	(a) Number of wagons supplied.	1st six months.	2nd six months.	TOTAL.	
				Up.	Down.
1912	583,716	282,041	301,675	Not available.	Not available.
1913	619,439	318,979	300,460		
1914	623,069	316,711	306,328		
1915	611,014	316,758	294,256		
1916	687,850	353,222	334,628		

(a) Includes wagons loaded on Bengal Nagpur Railway but invoiced by East Indian Railway but excludes wagons loaded on East Indian Railway and invoiced by Bengal Nagpur Railway.

Calendar years.	(a) Number of wagons supplied.	1st six months.	2nd six months.	TOTAL.	
				Up.	Down.
1917 . . .	651,054	370,129	280,925	393,658	267,396
1918 . . .	665,681	332,957	332,724	390,349	275,332
1919 . . .	683,896	343,199	340,697	377,307	306,589
1920 . . .	696,409	337,731	358,678	327,850	368,559
1921 . . .	646,441	356,863	309,778	278,190	368,251
1922 . . .	561,910(b)	233,555(b)	328,355	252,483	309,421
1923 . . .	652,789(c)	337,357	315,382(c)	302,789	349,950
1924 . . .	734,654	373,059	361,595	355,176	379,478

(a) Includes wagons loaded on Bengal Nagpur Railway but invoiced by East Indian Railway but excludes wagons loaded on East Indian Railway and invoiced by Bengal Nagpur Railway.

(b) Strike during February, March and April.

(c) Loading restricted by reason of Arrah floods.

4. Number of wagons supplied to traffic other than coal.—

Statement showing weight of GOODS traffic carried during the years 1912—1924.

Calendar years.	January to June.			July to December.			Total for the year.		
	Up-wards.	Down-wards.	Total.	Up-wards.	Down-wards.	Total.	Up-wards.	Down-wards.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1912 .	1,414,198	2,213,331	3,627,529	1,274,377	1,752,612	3,026,989	3,689,575	3,985,943	6,654,518
1913 .	1,461,091	1,800,191	3,261,282	1,316,121	1,633,083	2,949,204	2,777,212	3,433,274	6,210,486
1914 .	1,701,975	1,939,432	3,641,407	1,534,638	1,426,500	2,961,137	3,236,613	3,365,941	6,602,554
1915 .	1,773,038	1,884,531	3,657,569	1,348,821	1,409,310	2,848,131	3,122,759	3,863,241	6,506,600
1916 .	1,571,668	1,607,272	3,178,940	1,313,962	1,427,113	2,741,075	2,855,630	3,031,355	5,920,015
1917 .	1,359,455	1,669,043	3,020,398	1,294,044	1,465,303	2,759,347	2,653,490	2,195,246	5,788,745
1918 .	1,351,850	1,484,811	2,836,661	1,522,394	1,551,429	3,073,823	2,874,244	3,036,040	5,910,284
1919 .	1,548,107	1,472,583	3,018,690	1,516,308	1,414,572	2,930,880	3,062,415	2,887,165	5,949,579
1920 .	1,355,549	1,558,786	2,914,335	1,514,120	1,567,353	3,081,473	2,869,669	3,126,730	5,996,408
1921 .	1,764,596	1,837,175	3,601,771	1,861,789	1,298,760	3,160,549	3,646,385	2,635,935	6,282,320
1922 .	1,376,967	1,249,773	2,626,740	1,409,435	1,622,252	3,031,687	2,786,402	2,872,025	5,658,427
1923 .	1,496,689	1,884,517	3,381,206	1,420,658	1,638,986	3,069,644	2,926,327	3,523,503	6,449,830
1924 .	1,656,282	2,193,871	3,850,153	1,411,801	1,887,804	3,299,605	3,098,083	4,081,565	7,179,648*

The years 1921, 1922 and 1923 were affected by strikes and floods respectively. The first strike was from 18th December 1921 to 6th January 1922, and the second strike from the 2nd February 1922 to the 24th April 1922. The floods of 1923, which occurred near Arrah station, entailed the stoppage of traffic and the restrictions remained in force from 20th August to 22nd September 1923.

* November and December figures are approximate.

Statement showing the number of wagons loaded with goods other than coal during the years 1912-1924.

Calendar Years.	Number of wagons loaded.	1st six months.	2nd six months.	REMARKS.
1912	Not available.
1913 . .	258,173	69,622(a)	188,551	(a) This figure is for the months of May and June only. Figures for other months not available.
1914 . .	445,553	239,796	205,757	
1915 . .	451,661	245,592	206,069	
1916 . .	429,967	223,261	206,706	
1917 . .	388,652	197,544	191,108	
1918 . .	318,551	141,537	174,014	(b) Strike during February, March and April.
1919 . .	357,492	175,596	181,896	
1920 . .	370,247	165,138	205,114	
1921 . .	391,272	192,266	199,006	
1922 . .	310,505(b)	131,182(b)	179,323	
1923 . .	867,684	193,170	174,514	
1924 . .	410,551	213,575	205,976	

Figures of wagons supplied for upward and downward loading separately are not available.

5. **Distribution of empties between coal and other traffic.**—Subject to the conditions prevailing from day to day, endeavour is made to secure the distribution of the wagon stock available in the proportion of two-thirds for coal and one-third for traffic other than coal.

6. **Influence on wagon supply of (a) additions to, and (b) pooling of, wagons and (c) general improved facilities.**—Since the introduction of the wagon pool the chief factor which limits the supply of wagons to the coal district has not ordinarily been want of wagons, but the need of increased facilities, not only in the coal districts but elsewhere, to enable us to deal with the total volume of coal and merchandise traffic offering. In this connection, it must be remembered that during the war development of additional facilities was brought to a stand and that it was not until 1922 that the State was in a position to allot funds to Railways for any large programme of development. On the East Indian Railway, once funds had been assured, a very large development programme in the coal fields and elsewhere was taken in hand. This programme comprised large new marshalling yards and the construction of a great deal of additional running track on busy sections. Such works involve a great deal of new earthwork and as with new earthwork time has to be given to allow for consolidation, it must be realized that it is only during last year that the first portions of our development programme have begun to come into "bearing." During the next two years other portions will progressively come into use, and as this takes place so will the efficiency of the wagon supply to the coal districts increase. For the last few months owing to the dull market for coal we have actually been working below our capacity as regards the supply of

wagons in the coal districts but the fact that during the first six months of last year we supplied a daily average of 2,050 wagons, whereas in former years the highest daily average supplied (taking a year's figures) was 1,903 wagons (in 1920) gives an indication of the extent to which the efficiency of the wagon supply in the coalfields has already improved. It may be urged that the total number of wagons supplied in the coalfields during the first six months of last year was only slightly more than the number supplied in the first six months of 1917. In this connection it must, however, be remembered that in 1917 the need for coal was so imperative that both goods and passenger traffic was severely restricted to permit of the maximum movement of coal traffic.

The number of wagons loaded with coal in 1924, *vide* answer to question 3, constitutes a record, and beats the previous record of 1920 by 38,245 wagons, or an average of nearly 105 wagons per day. As stated in the footnote (a), the figures include wagons loaded on the Bengal Nagpur Railway and invoiced by the East Indian Railway but exclude wagons in the reverse direction. Were figures included of wagons loaded on the East Indian Railway and invoiced by the Bengal Nagpur Railway (which wagons since the introduction of the wagon pool the East Indian Railway has to find) the result would be better still, as this number always exceeds the number of wagons in the reverse direction and the transactions *via* the Exchange Links in 1924 were in excess of those in 1920.

At the present time it is estimated, *vide* answer to question 11, that, if necessary, the East Indian Railway can supply an average of 2,300 wagons a day in the coalfields but, as explained above, this potential average may be expected to rise progressively as further portions of the development programme come into "bearing."

7. Average turn-round of coal wagons.—The average turn-round of coal wagons between the coalfields and the docks is 6 days:—

	Days.
(a) From colliery siding to Dock Junction	3·4
(b) From Dock Junction back to Dock Junction (<i>i.e.</i> , on Port Commissioners premises)	1·2
(c) From Dock Junction to Ondal	1·5

These figures have been arrived at from a check of the actual time taken during October and November 1924 by two lots of over 1,000 wagons each chosen at random. Certain of the wagons were loaded at sidings on the Bengal Nagpur Railway and made over to the East Indian Railway *via* the Exchange Links for invoicing and despatch or *via* Asansol Junction for onwards transit to the docks, and the period these wagons were on the Bengal Nagpur Railway has been excluded from calculations.

All wagons returning from the docks do not necessarily go to the coalfields; they are liable to be detached *en route* or diverted elsewhere.

Figures for 1912 are not available.

(iii) *Indents and allotment to collieries.*

8. Indents and wagon allotment.—Indents from collieries for wagons are submitted either (a) against duly authorised supplies or (b) for loading to the public, in which latter case no authorisation is necessary.

In the case of duly authorised supplies the procedure is as detailed below:—

When the Coal Transportation Officer sanctions a supply of wagons, he forwards in duplicate to the district office concerned, an authorisation letter in which is shown the class of supply sanctioned, the name of the supplying colliery, the number of wagons to be supplied and the name of the consignee on whose account the coal is to be despatched.

For Foreign Railway Locomotive coal, the supply of wagons is authorised by the Chief Mining Engineer to the Railway Board, through his State

Railways Coal Superintendent at Dhanbad. Except that these authorisations are not issued in duplicate, the procedure is the same as in the case of authorisations issued by the Coal Transportation Officer.

On receipt of the Coal Transportation Officer's authorisation letter in the district office, one copy is initialled and returned to the Coal Transportation Officer in token of acknowledgment and the other copy is filed in the district office after being posted in the supply register (or ledger). In this ledger the number of wagons authorised by the Coal Transportation Officer is placed to the credit of the colliery concerned, and as supplies are made, the account is debited and thus it can be seen at a glance when the supply is completed.

A colliery wishing to load coal against an authorisation submits a wagon indent to the district officer showing the number of wagons required, the consignee's name, etc., and the Coal Transportation Officer's authorisation letter number and date under which the indent is submitted. On receipt in the district office, these indents are passed to the indent checker who checks them with the supply register and passes or rejects them according to whether the authorisation particulars quoted are correct or not.

The indents are then made over to posting clerks who sectionize them and prepare an allotment memorandum for each pilot section.

The allotment memoranda are submitted to the Allotment Supervisor or his senior assistant who enters in the supply columns, the number of wagons to be supplied against each indent. When wagons are short of indents, a proportionate allotment based on the indent of each colliery is made. The Allotment Supervisor personally totals the supply columns and finally initials the allotment memoranda which are then returned to the posting clerks.

The posting clerks prepare—

- (a) A copy of the allotment memorandum for each section.
- (b) A pilot guard's supply memorandum for each section.
- (c) A wagon challan for each indenting colliery, showing the number of wagons allotted and the purpose for which they have been allotted.
- (d) A supply statement for each section.

The documents for each dépôt are sorted out and sent out to the dépôt stations daily, while the original allotment sheets are made over to the indent checker who debits the wagons allotted to the accounts of the various collieries in the ledger.

With "public" supplies, the procedure is not so involved. The colliery is only required to state in the indent the number of wagons required and the direction in which they will be loaded. The number of wagons indented for is posted in the allotment memoranda and the Allotment Supervisor, after making the allotment against preferential authorisations, distributes the remaining wagons available against "public" demands. If the wagons available fall short of those indented for or permitted by headquarters to be loaded in a particular direction, *via* particular routes or to particular destinations, a proportionate allotment is made to each colliery on its demand, on basis and siding accommodation spare after preferential demands have been met in full.

Samples of forms referred to above are attached as Appendices B, C, D, E, F and G.

9. Over-indenting.—Appended below are the orders in force relating to over-indenting:—

"Collieries, with siding accommodation for 3 wagons or less, are permitted to indent up to three times the capacity of their loading space. This includes for both Up and Down.

"Collieries with accommodation for one half rake, but for less than two half rakes, may ordinarily indent up to twice the capacity of their loading space. Such collieries are, however, permitted to indent for 3 half rakes.

two for the Upward direction and one for the Downward, provided no other indents are made.

"Collieries with accommodation for more than 3 wagons, for less than 25 wagons, and for 50 wagons or more are permitted to indent up to twice the extent of their loading accommodation.

"Half rakes are ordinarily allotted only to collieries with accommodation for such, but two or three collieries (not more) under the one managing agency or proprietor, may indent for a half rake between them, provided they possess the requisite accommodation and are served by the same pilot."

The practice of over-indenting is general.

10. Wagon supply compared with indents.—

The following statement shows the total numbers of wagons (a) indented for and (b) supplied on indent.

Years.	1st Half-year.				2nd Half-year.			
	Indents.*		Supplies.*		Indents.*		Supplies.*	
	Total.	For Foreign Rys. Loco.-coal including B. N. & E. I. Rys. market coal. (a)	Total.	For Foreign Rys. Loco.-coal including B. N. & E. I. Rys. market coal. (a)	Total.	For Foreign Rys. Loco.-coal including B. N. & E. I. Rys. market coal. (a)	Total.	For Foreign Rys. Loco.-coal including B. N. & E. I. Rys. market coal. (a)
1912	}	...	...	Not available	...	...	...	...
1913								
1914								
1915								
1916								
1917	444,250	126,504	346,753	120,158	289,766	92,504	262,364	89,462
1918	656,940	143,022	310,246	125,698	532,312	99,905	310,533	93,484
1919	840,276	108,865	314,478	102,635	835,878	100,892	318,112	96,339
1920	1,928,801	104,409	313,139	101,482	1,521,014	94,908	337,660	91,887
1921	1,228,632	117,531	312,156	112,016	712,328	97,418	289,164	90,059
1922	680,237	175,761	213,590	101,126	859,367	118,845	308,420	99,063
1923	634,185	117,462	315,114	111,442	591,691	114,527	292,948	101,083
1924	659,510	162,721	344,598	124,778	494,912	165,180	339,116	146,338

* Excluding Giridih.
(a) Included in total.

(iv) Capacity to handle coal traffic.

11. Wagon capacity of coalfields.—The total average number of wagons which can be supplied to and despatched from the coalfields daily without congestion is at present 2,300. At certain times of the year, however, when

goods loading is light the railway can supply without congestion slightly over 2,500, made up as under:—

Asansol district	1,000
Jherriah district	1,300*
For Bengal Nagpur Railway	200
TOTAL	2,500

* Including about 130 for Bokaro and Kargali collieries.

See also answer to question 6.

The number of wagons required for collieries owned by railways is about 250.

Giridih	150
Bokaro	50
Kargali	50
TOTAL	250

Figures for each year since 1912 are not available.

12. **Maximum capacity for export and bunker coal.**—The potential loading in the down direction is for the moment limited by the capacity of the section between Ondal and Khana, which is 30 goods trains. Of this figure an average of 6 trains are merchandise and the capacity for coal may, therefore, be stated to be 24 trains or 1,320 wagons.

Present downward coal loading averages are as under:—

	Wagons.
Intermediate stations	200
Howrah	200
Docks and Running Power Stations	300
Via Naihati to and via Eastern Bengal Railway stations other than above	400

The maximum amount of export and bunker coal that can be handled between the coalfields and the Docks, Howrah and Shalimar may, therefore, be taken as 600 to 700 wagons daily at present. Any increase over this figure would necessarily be, at times, at the expense of other downward traffic.

Measures are, however, now being taken to increase the capacity of the Ondal-Khana section to 45 down goods trains daily, and when these measures have come into effect, the maximum amount of export and bunker coal that could be handled between the coalfields and the Docks, Howrah and Shalimar will be increased by about 800 wagons a day. A limiting factor that might then, however, come into play, so far as Docks traffic is concerned, would be the maximum train passing capacity of the Jubilee Bridge between Bandel and Naihati which is estimated at 28 down goods trains daily. To overcome this difficulty the East Indian Railway have put forward a fully worked out scheme for a new Bridge over the Hooghly at Bally, and this proposal is now under the consideration of Government. If this scheme is proceeded with, there will be an ample margin of capacity for many years to come.

(v) Working of sidings.

13. **Working of sidings.**—There are two methods in vogue on the East Indian Railway for supplying empty and clearing loaded wagons from colliery sidings. These are known as the 10-hours and 20-hours systems. See answer to question 18.

(i) *The 10-hours system.*—A supply pilot with the necessary empties leaves the dépôt station for the colliery section in the early hours of the morning and is required to place the empty wagons in position at the sidings before

7 A.M. Collieries are allowed 10 hours free loading time from time of placing after 6 A.M. and in the afternoon a drawing pilot removes the loaded wagons and brings them into the depôt. If wagons are placed after 7 A.M., collieries can claim 20 hours free loading time.

(ii) *The 20-hours system.*—Under this system the one pilot does the work of supplying empties and drawing loaded wagons from sidings. These pilots leave the depôt station usually between the hours of 7 A.M. and noon and collieries are allowed 20 hours free loading time. Wagons are removed the day after placement.

The 20-hours system is followed usually on sections where the traffic is light and the extra cost of a 10-hours pilot would exceed the small saving in wagon hours that would be effected by it. Where the traffic is heavy and facilities and circumstances permit, the 10-hours system is worked to.

(vi) *Weighment, marshalling and despatch of wagons.*

14. Weighment, marshalling, and despatch of wagons.—The method of weighing coal wagons is to pass them over a weighbridge either automatic or steel yard. (See also answer to next question.)

The nett weight for charge is the gross weight of the wagon shewn on the weighbridge indicator less the tare of the wagon.

A record of the gross weight and tare of each wagon weighed is maintained by the weighbridge staff in a register provided for the purpose.

On completion of the weighment, this register is sent to the "Invoice Office" where a clerk enters the nett weights on D. Notes, from which the invoices are prepared.

In all yards the weighbridge lines lead direct into the marshalling yard and after passing over the weighbridge, the wagons are sorted into groups on separate lines in accordance with the system of marshalling in force.

When a complete train load has been grouped in this manner the requisite number of vacuum braked wagons are picked out and placed in front of the load and the train, after examination of the wagons by the Carriage Examiner, is despatched.

15. Gravity yards and automatic weighbridges.—

(a) The gravity system of marshalling is in use at—

Katrasgarh,
Kusunda,
Jherriah,
Pathardihi,
Sitarampur,
Ondal (Down Yard).

The Down yard being constructed at Asansol will also be of the gravity type.

(b) The following yards are provided with automatic weighbridges:—

Katrasgarh (2),
Kusunda (2),
Jherriah (1),
Pathardihi (2),
Barakar (1),
Giridih (1),
Sitarampur (1),
Asansol (1),
Ondal (1).

16. Maintenance of weighbridges.—The Head Weigh Clerk is in charge of a weighbridge and is responsible for advising the proper authorities of any

defect. He reports by wire to the Locomotive Special Out-door Fitter any defect in the weighbridge and to the Permanent-way Inspector any defect in the permanent-way. In addition, tests are regularly made by the Out-door Fitter either monthly or quarterly according to the extent the weighbridge is used.

(vii) *Extensions and improvements to depôt yards.*

17. Improvements in depôt yards.—*Katrasgarh.*—The yard has only recently been entirely remodelled. In 1923 and the current year, 3 pre-weighment and 3 empty receiving lines have been added. A Locomotive shed has also been provided since 1920. The proximity of colliery workings prevents further enlargement of this yard.

The capacity is 350 wagons per day.

Kusunda.—The yard at present consists of—

- 3 empty receiving lines of which only two, however, are in practice available for this purpose,
 - 4 pre-weighment lines,
 - 11 marshalling lines,
 - 2 short lines used for transshipping wagons,
 - 1 loop and 2 passing sidings—one passing siding and the loop are used as departure lines for Down trains. The other passing siding cannot always be used as such due to colliery sidings having been constructed off it,
 - 2 short sick lines,
- and its capacity is 450 wagons.

The additional traffic anticipated will mean the depot having to handle 650 loaded wagons per day and the remodelling of the whole yard to deal with this traffic has, therefore, been sanctioned and work is in progress.

The new yard will consist of—

- 7 empty receiving lines,
- 6 pre-weighment lines,
- 4 departure lines,
- 13 marshalling lines,
- 2 transshipment lines,
- 2 longer sick lines.

It is hoped that when the yard is remodelled, it will be possible to convert two of the present 20-hours pilots, which work into this depot, in 10-hours pilots.

The passenger station will be entirely isolated as also the main running lines, which will run along the north extreme of the yard and thus not interfere with work in the yard proper.

Therriah.—The existing accommodation is—

- 3 pre-weighment lines,
 - 2 empty receiving lines,
 - 7 marshalling lines each capable of holding a half load only,
 - 2 sick lines, also used for transshipping wagons,
- and the capacity of the depôt is limited to 250 wagons.

The provision of additional accommodation has, however, been sanctioned and it is anticipated that the work will be completed by May 1925.

The new yard will consist of —

- 3 pre-weighment lines,
- 2 empty receiving lines,
- 8 marshalling lines to hold full loads,
- 3 sick lines and a shunting neck.

A second 40-ton automatic weighbridge has also been provided for.

The capacity of the depôt, when the alterations are complete, will be 350 wagons per day.

Pathardihi.—The following facilities have been provided:—

4	additional marshalling lines,
2	„ departure lines,
2	„ empty receiving lines,
1	„ pre-weighment line.

One further pre-weighment line is in course of construction and will be opened for traffic shortly.

Since 21st November 1924, the capacity of the depôt has been raised from 350 to 400 wagons.

Dhanbad.—Owing to the facilities for receiving empties having been found inadequate, 4 Up empty receiving lines are now in course of construction. Several other minor alterations, which will simplify movements in the yards, are also being made.

Barakar.—The remodelling of this yard was sanctioned in 1920 and completed in 1923. The depôt is now capable of dealing with 150 loaded wagons per day as against 100 before it was remodelled. The facilities now provided will be ample for some time to come.

Asansol.—The down yard is being entirely remodelled and should be able to handle twice as much traffic as is now dealt with. The new yard will be a gravity yard and will consist of receiving, grouping, marshalling, sick and other service lines and a departure yard. A small marshalling yard is also being provided to deal with traffic from the pilot sections served by Asansol. Work was commenced early last year.

Up Yard.—The opening of the Ondal Up yard will relieve Asansol of a great deal of work, but plans are in preparation for re-arrangement of the existing accommodation at Asansol so as to provide better facilities for the quick movement of stock, under the new conditions.

Ondal.—An Up yard on modern principles is in course of construction and will deal with all upward traffic including the distribution of empties. The yard is of the hump and gravity type and will possess receiving lines, sorting and marshalling lines, stabling sidings for empty wagons and departure lines.

The Ondal Up yard is expected to be completed and in full working order early this year.

The Ondal Down yard has only recently been remodelled.

(viii) *The 10-hours and 20-hours systems of supply.*

18. **The 10-hours system.**—See answer to query 13. The following is a list of the coal pilots on the Dhanbad district:—

DHANBAD DISTRICT.

<i>Kusunda.</i>		Hours.
Bansjora pilot	. . . . .	10
Kusunda pilot	. . . . .	20
Khoira pilot	. . . . .	20
Sijua pilot	. . . . .	20
<i>Katrasgarh.</i>		
Angrapathra pilot	. . . . .	20
Jamuni pilot	. . . . .	20
North Line pilot	. . . . .	20
South Line pilot	. . . . .	10

DHANBAD DISTRICT—*contd.**Pathardihi.*

	Hours.
West Line pilot	10
Lodna pilot	10
Jeenagora pilot	20
Goluckdih pilot	20

Jherriah.

Gopalichuck pilot	10
Bhuggutdih pilot	10
Suratar pilot	10

Gomoh.

Bokaro pilot	20
Kargali pilot	20

As explained in the answer to query 13, if collieries are to be allowed 10 hours of day light as free loading time, the empties must be placed in position in siding before 7 A.M. To enable this to be done on all pilot sections, it is essential that the full complement of empties, averaging 1,300, is at all depôts by 23 hours on the day previous, to allow of examination of stock, the sorting out of wagons pronounced damaged, and the forming of loads according to the types of wagons required on each pilot section.

From past experience it has been found that with normal conditions the maximum number of wagons that can be worked into depôts after the departure of supply pilots and before 23 o'clock is 700. These are all utilised by the present 10-hours pilots. Empties arriving later than 23 o'clock would be idle for a whole day if the 10-hours system were universally adopted and in practice it would amount to maintaining a pocket of approximately half a day's supplies at each depôt. The detention to such wagons would negative the saving in wagon hours, the principal advantage of the 10-hours system. At present the 20-hours pilots utilise these wagons and the turnround, *i.e.*, the interval between the time of their arrival at the depôt and the return loaded under the 20-hours system, is less than if the 10-hours system were adopted.

Further, the conversion of all pilots to the 10-hours system would mean all having to go out from depôts in quick succession between 23 hours and 3 hours approximately and they would all return together and detentions occur to some while the others were being admitted. It would be impossible, moreover, for depôts to handle all the loaded wagons together without congesting the yards.

Seven pilots originate from Dhanbad, and to convert all these into 10-hours pilots would mean 7 supply pilots having to leave Dhanbad in quick succession between mid-night and 3 A.M. and the engines of the same number of drawing pilots to return to Dhanbad at about this time.

Kusunda Depôt.—The capacity of this depôt is 450 wagons and if all pilots were worked on the 10-hours system it would mean 9 loads having to be received on 4 pre-weightment lines between 20 o'clock, the time the first drawing pilot usually finishes work, and 2 o'clock when the section must be clear for the supply pilots to go out. This is not possible as the examination and weighment of each load take 2½ hours.

Empties, moreover, are not usually available before 23 hours for more than one pilot and at present even the 20-hours pilots, *viz.*, Kusunda, Khoira and Sijua, are often delayed waiting for empties. For these reasons it is impossible to work these pilots on the 10-hours system.

Katrasgarh Depôt.—There are three 20-hours pilots originating from this depôt. These are the Angarpathra, North Line and Jamuni pilots. As at Kusunda, empties sufficient for only one pilot (South Line) are available at

Katrasgarh before 23 hours. Further, the Angarpathra pilot works over the main branch line and the morning and evening passenger service prevents this section from being worked on the 10-hours system. It was once given a trial and failed. Similarly, the North Line and Jamuni pilots also cannot be worked as 10-hours pilots owing to the main branch line being required in the early hours of the morning for the passage of the Bokaro pilot (2 loads each way) and Kargali pilot (1 load each way).

Pathardihi.—The capacity of this depôt is 400. Two pilots, the Jhennagurrah and the Goluckdih pilots, are worked on the 20-hours system, as sufficient empties are not available in time for them to be put on the 10-hours system. Also, as in the case of Kusunda, the pre-weighment lines would not be able to accommodate 8 loads in the time available before the supply pilots have to leave.

It will be seen from the above that the principal difficulties in the way of the 10-hours system being adopted on all pilot sections on the Dhanbad District are:—

- (1) the regularity in placement of wagons essential if collieries are required to load in 10 hours and the consequent limiting and fixing of the time within which work has to be done;
- (2) the impossibility of making up all loads of empties in a limited space of time and of receiving and weighing in limited time loaded pilots arriving in quick succession;
- (3) sufficient empties not being able to work into depôts in time for placement before 7 A.M.;
- (4) facilities.

The provision of the facilities sanctioned and under consideration will allow of more pilots being put on the 10-hours system, but to convert all to the 10-hours system will not be possible for some time yet.

The principal difficulty is the essential condition of 10 hours *day light* for loading which definitely fixes and limits the time in which the forming of loads, supplying, drawing, examining and weighing of wagons has to be done. Alternate periods of high pressure and practical stoppage of work at depôts would result if the 10-hours system were adopted throughout instead of the work being distributed as evenly as possible over the 24 hours.

ASANSOL DISTRICT.

Ondal.

	Hours.
Chara pilot	20
Baraboni pilot	10
Jamuraia pilot	10
Toposi pilot	10
Ukhara pilot	10
Gourangdih pilot	20
Kasta pilot	20

Asansol.

Up Raneegunge pilot	10
Down Asansol pilot	10
Narsamuda pilot	20
Sodepore pilot	20

Sitarampur.

Domohani pilot	10
Borrea pilot	10
Salanpur pilot	20

ASANSOL DISTRICT—*contd.**Giridih.*

	Hours.
Serampore A pilot	20
Serampore B pilot	20
Miscellaneous pilot	20
Kurharbaree pilot	20

Barakar.

Chanch pilot	20
Mugma pilot	20

Ondal Depôt.—Chara pilot. The conversion of this pilot into a 10-hours pilot is under consideration.

Gourangdi pilot. This is the Gourangdi Mixed Passenger pilot. Coal traffic averages 6 wagons a day.

Kasta pilot. Due to the long lead from Ondal, to work this pilot on the 10-hours system would be expensive, and its return journey would, moreover, be interfered with by the Ukhara pilot. The traffic is also very small, the daily average, when loading is full on indent, being 20 and the usual figure 16 wagons.

Asansol Depôt.—Narsamuda pilot. This pilot does practically no coal work but has to handle an average of about 50 to 60 wagons a day for the Hirapur Iron Works. The wagons placed are all loaded, and 48 hours free time is allowed for unloading and re-loading. The coal traffic dealt with averages 4 wagons a day.

Sodepur pilot. This pilot works the Sodepur branch and the Dhadka and Old Station sidings. It works through Asansol yard, and does its own weighments. The traffic from the Sodepur branch when loading is full on indent is 32 wagons but usually only 16 wagons a day.

Sitarampur Depôt.—Salanpur pilot. The loading on the Salanpur branch is 26 wagons when indents are met in full but averages 20 wagons daily. This pilot has to work off the main line at Dendwa, and also works Damaguria sidings. The long lead and small loads would render the 10-hours system comparatively expensive, especially as the hours on duty are affected by main line traffic.

Giridih.—With the exception of the Kurharbaree pilot, none of these can be worked on the 10-hours system, due to the fact that working would be interfered with by the movements on the Colliery metre gauge lines, and that Giridih yard would not be able to receive the pilots together as would have to be done. At present wagons come in throughout the 24 hours and are got away with an average detention of 3 hours.

Barakar Depôt.—Chanch pilot. The loading of the Chanch pilot varies considerably. When it is low one engine is utilized, and two when traffic is heavier. To put this pilot on the 10-hours system would mean always utilizing 2 engines.

Mugma pilot. This pilot has to proceed to Fatka to cross over and work. To put this pilot on the 10-hours system would mean occupying the main lines 4 times a day against twice at present and this would interfere with traffic over the main line as in the case of the Salanpur Pilot.

Briefly, the reasons for the number of 20-hours pilots on the Asansol district are:—

- (1) the small traffic and consequent small saving in wagon hours which the 10-hours system would effect as against its greater cost, and
- (2) the fact that 10-hours pilots would occupy main lines oftener and thus interfere with through traffic.

(ix) *Overloading and load lines.***19. Overloading at collieries.**—(A) The main causes if overloading are:—

1. The failure by collieries to determine the specific gravity of their coal, and make the simple calculations necessary. The load line in wagons, having been marked at 42 cubic feet per ton, cannot possibly suit coal of all sizes and specific gravities.

2. Lack at many Collieries of expert staff to supervise the loading of wagons.

3. Disregard of Tariff Notifications and Notices issued by the Railway as to gross loads when traffic is loaded for particular destinations and where, it is necessary to observe restrictions put on to meet both track and axle load limitations.

B) The scale on which penalties are levied is:—

- (1) When the number of wagons overloaded does not exceed 5 per cent. of the total despatched in one month . . . No penalty.
- (2) When overloading exceeds 5 per cent. but not 7 per cent. Re. 1 per wagon overloaded beyond 5 per cent.
- (3) When overloading exceeds 7 per cent. but not 10 per cent. Rs. 8-3 per wagon overloaded beyond 5 per cent.
- (4) When overloading exceeds 10 per cent. Rs. 10 per wagon overloaded beyond 5 per cent.

Period.*	No. of wagons on which penalty realised.	Total amount of penalty.
		Rs. A. P.
October 1921 to September 1922	21,244	42,488 0 0
October 1922 to September 1923	20,849	1,80,325 13 9
October 1923 to September 1924	24,190	1,47,466 8 0

* It will be observed that these figures are not for calendar years but for periods of twelve months each. This gives more up-to-date information, as figures for the calendar year 1924 will not be available for some little time yet.

20. Percentage of overloading wagons.—

Period.	Total No. of wagons despatched.	Total No. of over-loaded wagons on which penalty was levied.	Percentage.
October 1921 to September 1922	518,005	21,244	4.1
October 1922 to September 1923	618,977	20,849	3.3
October 1923 to September 1924	708,872	24,190	3.4

21. Load line on wagons.—Many foreign railway wagons have no load lines marked in them and during recent years the attention of the Agents of these railways has been repeatedly drawn to this matter. It has latterly, however, been recognised that load lines calculated at 42 cubic feet per ton are of very little value, and we have, therefore, not been so insistent on the necessity for them.

A load line calculated at 42 cubic feet per ton with no allowance for either (1) air spaces which vary according to the sizes of the coal and whether or not it has been compactly loaded or (2) the different and varying specific gravities of steam, slack, dust and coke, all of which give different results, is not

an accurate guide of the height to which coal may be loaded and to rely wholly on the load line must mean under or over loading.

22. Desirability of collieries marking special load lines.—It would be preferable if each colliery, in view of its special knowledge of the specific gravity of the coal it is raising marked its own load line in chalk on the wagon before it commenced loading. The East Indian Railway has advocated this before, but the simple measurements and calculations involved seem to be beyond the class of man generally employed by collieries to supervise the loading of wagons.

The following suggestion was made a few years ago, but was turned down by the trade.

"It is recognised that owing to the variations which exist in the specific gravity of the different classes of coal loaded by different collieries, a load line worked out, like the present one, on a fixed specific gravity of 42 cubic feet to the ton cannot be a reliable guide in regard to the height to which every class of coal without exception can be loaded in the different wagons in use in the coalfields. It has, therefore, been suggested that all wagons should be marked with a "Mineral Loading Index Figure" which should be used for the purpose of working out the height to which coal and other minerals may be loaded according to their varying specific gravities in each type of wagon.

"This index figure is the floor area of each wagon worked out in square feet and divided into 12 with the result given to five places of decimals.

"In order to arrive at the height to which each class of coal may be loaded in each type of wagon it will be necessary to multiply the index figure by the specific gravity of the coal to be loaded and by the quantity of coal which may be loaded in each particular type of wagon as follows:—

Index figure.	Specific gravity of coal.	Quantity of coal which may be loaded.
05607	42 C. ft.	19 tons.

"This gives 44.74 inches or 3 feet 8½ inches, the height to which the coal may be loaded.

"The Colliery Manager or his loading Representative will be responsible for:—

- (a) knowing the specific gravity of each class of coal which he loads up at each of his collieries,
- (b) measuring the height to which each wagon may be loaded after making the necessary calculations as detailed above and marking the height on the inside of the wagon in chalk.

"The Railway Companies will be prepared to assist colliery managers further by issuing a printed pamphlet which will save them all calculations. In this pamphlet there will be a separate page for every specific gravity that can possibly be applicable to steam coal, rubble coal, slack coal, soft coke or hard coke. On each such page will be found against the different index figures the heights to which the required amount of coal should be loaded."

(x) *Demurrage.*

23. Demurrage.—Demurrage at the rate of 8 pies per ton of carrying capacity per hour is charged on wagons that are not ready for removal after expiration of the free loading time allowed.

In the case of wagons placed in position not later than 7 A.M., the free time is 10-hours from the time of placement after 6 A.M. In the case of wagons placed in position later than 7 A.M. the free time is extended to 20 hours.

When, after expiration of the free time, the wagons are not ready for removal, demurrage is charged from the time of departure of the pilot by which they should have been cleared, up to the time of arrival of the pilot on the day on which the wagons are actually available for removal.

24. Extent of demurrage charged.—

Calendar year.	Total No. of wagons on which demurrage was realised.	Total amount collected.	Percentage of the number of wagons on which demurrage was realised on total despatched.
		Rs. A. P.	
1923 . . .	3,483	42,188 14 0	53

Figure for previous years are not available.

(xi) Check on delays in transit.

25. Prevention of delays to wagons.—(a) Reference is invited to the answer to query 8. The various documents mentioned in the concluding paragraphs of that reply (*vide* Appendices D, E, F and G) are sent to the yard master of the depôt station, who makes over the section supply memorandum and wagon challans to the sectional pilot guards. The pilot guard supplies wagons according to the supply memorandum and enters on it the individual numbers of the wagons supplied at the various sidings. He also enters on the wagon challan the individual numbers of the wagons placed in the siding and posts the challan in the box provided by the colliery for this purpose. The colliery manager is required to check the entries on this challan with the wagons actually supplied, and, after noting the purposes for which the wagons have been supplied, to sign and return the challan to the district office.

On his return from the section, the pilot guard makes over the supply memorandum to the yard master who forwards it to the district office.

The wagons are labelled by the colliery staff and a declaration (or forwarding) note is prepared. On arrival at the siding of the pilot which is to clear the loaded wagons, the declaration note is made over to the pilot guard who, after checking the entries thereon with the wagon labels, grants a receipt for the declaration note. He then enters the numbers of the wagons on a clearance memorandum and draws the wagons from the siding. On his return to the depôt station, after clearing the section, the guard makes over the declaration notes to the head weigh clerk. The clearance memorandum is handed in to the yard master who forwards it to the District Superintendent.

The head weigh clerk has meanwhile received from the district office a copy of the supply statement, showing how many wagons have been allotted to each colliery and their purpose, and on receipt of the declaration notes he compares the details of the loaded wagons with the entries in the supply statement. If they agree, he enters on his supply statement the individual numbers of the wagons loaded for each consignee and then returns the supply statement to the district office. If, however, any discrepancy comes to notice, the wagons are held up and the district office communicated with. The head

weigh clerk is also required to compile a declaration statement, which is a summary of the entries in the declaration notes, and forward a copy to the district office.

In the district office the following are the principal checks carried out by the assistant allotment supervisors employed for this purpose:—

- (a) The allotment memorandum is checked with the supply register to see that the wagons have been allotted in their proper class, and also that the number of wagons allotted to each colliery has been correctly debited.
- (b) The supply statement before being sent to the head weigh clerk, is checked with the allotment memorandum.
- (c) On being received back from the head weigh clerk the supply statement is again checked and if, for any reason, there has been a short supply, the debit entry against the colliery concerned is rectified in the ledger.
- (d) The supply statement is further checked with the declaration note statement submitted by the head weigh clerk.
- (e) The allotment memorandum is checked with the original indents, on the following day.
- (f) The supply and clearance memoranda of two or three selected pilots are checked daily with the declaration note statement by the assistant allotment supervisors. Apart from this surprise check by the assistant allotment supervisors, these three documents are checked daily against each other by clerks before posting in the "Indent and Supply" registers.

This ensures that wagons are allotted and supplied correctly and booked by collieries to the consignees for whom they were allotted.

(b) In order that unnecessary delays may not occur to wagons in colliery sections, registers, called pilot guards' registers, are maintained at all depôt stations for each pilot section.

In these registers, pilot guards of supply pilots are required to enter the following details daily on their return from the section:—

- (1) Name of siding at which wagons have been placed.
- (2) Time of supply.
- (3) Whether loaded or empty.
- (4) Individual numbers of wagons supplied.
- (5) Individual numbers of damaged wagons stabled in section.
- (6) Individual numbers of loaded wagons stabled in section.
- (7) Individual number of empty wagons stabled in section.
- (8) Date stabled.

Pilot guards of clearance pilots are also required to enter in columns 5, 6 and 7 of the pilot guards' register details of all wagons found stabled and also details of any further wagons which may be stabled by them. The yard master scrutinizes the register daily and is able to see what wagons are in the section. It is his duty to see that wagons are not stabled unnecessarily and that they are cleared as soon as possible.

The district inspector, on his visits, is also required to examine the register, see that it is being properly maintained and report any instances of unnecessary detentions which may come to his notice.

(c) The stock on hand in the yard is noted every morning at 6 hours and checked by the yard master and any old date stock specially worked away.

Wagons are marshalled under the direct supervision of assistant yard masters, the yard masters exercising a daily check. The destinations of all loaded wagons received from colliery sections are recorded and the assistant yard masters give orders as to formation and despatch of trains.

To facilitate marshalling, distinct labels are provided for coal wagons booked in the Up and Down directions generally and special labels for Howrah, Running Power Stations, Docks and *via* Delhi Southern Punjab Railway.

The District Superintendent and his Assistants and inspectors, when visiting yards, examine labels on wagons to see how long the wagons have been on hand and yard masters are called upon to explain unusual detentions, if any. A daily statement is also prepared by all stations showing the average time wagons remain in their yards and this is checked in the District Office and communicated daily to headquarters.

The stock of the whole district is further shown in a register which the District Superintendent personally checks every morning. This register not only shows the stock on hand for every destination, but also the number of trains worked out during the previous 24 hours. If the District Superintendent notices short despatches or excess stock at any depôt, he immediately telephones to the yard master concerned.

In the Coal Manager's office, a weekly statement is received from the General Yard Superintendent, Kidderpore Docks, of all wagons loaded with coal arriving at the Docks and showing time taken in transit. Delays are looked into and where they are found to have been unnecessary, steps are taken against those responsible.

(d) No particular check is kept on individual empty wagons returning from the docks to the coalfields, but information is received daily from Dock Junction to show how clearance of empties is being effected. All empty wagons from the Docks do not necessarily go to the Coalfields.

The various forms mentioned above are Appendices D, E, F, G, H, I, J, K and L.

(xii) Co-operation of collieries.

26. Co-operation of collieries with the Railway.—(a) Very little assistance is received from collieries in regard to the fixing of door cotters, which should be done *before* loading and not after. The importance of properly securing doors is constantly brought to the attention of Colliery Managers, both by the issue of printed circulars and individual letters, but without result. A copy of the Coal Manager's last Circular on the subject is at Appendix M.

(b) Practically no assistance is received in respect of loading covered wagons up country as far as possible and loading is haphazard, coal for all directions and points being loaded in all types of wagons at random.

(c) As to loading wagons to the same destination in groups as far as possible the same remarks apply; sometimes it almost seems that collieries go out of their way not to load wagons for the same destination together.

(xiii) Wagon Supply.

27. Proportion of open and covered wagons supplied.—The proportion of open and covered wagons supplied in the coal-fields daily is as 2:3.

28. Supply of open wagons to particular collieries.—(a) Although the work of sorting out and supplying open wagons to all collieries loading for the Docks will involve much time and expense, there are no insuperable difficulties in the way of this being done.

For the reason given below, however, the adoption of the suggestion would, at times, lead to uneconomical working.

To despatch the outward goods traffic offering at the Docks, the Port Commissioners require a certain number of covered wagons daily and though generally the requirements can be met from the wagons received loaded at the Docks, the demand, at certain times of the year, for covered wagons for outward traffic is considerable and, if we were to confine the loading of coal entirely to open wagons, there would, at such times, almost certainly not be a sufficient number of covered wagons available at the Docks to enable the demands of the outward traffic to be met.

Additional covered empty wagons would then have to be obtained from elsewhere and considerable empty haulage would be thus incurred.

(b) There are very definite orders in force at present that only open wagons are to be supplied to collieries using mechanical loading apparatus and this matter is watched very closely.

(c) The number of coal consumers using mechanical unloading apparatus is, with the exception of the Calcutta Electric Supply Corporation, nil. (See also answer to Question 46.) Kulti, Hirapur and Tatanagar have elevated tracks on which the use of hopper wagons is suitable. There is also an elevated track at Bhadreswar Ghat. Much would depend on the number and situation of these plants and elevated tracks, but as the question is not likely to assume the aspects of a difficult problem for some years yet, there will not be much difficulty in supplying open wagons to collieries loading to such points.

It must, of course, always be remembered that a colliery is at liberty, provided no restrictions are contravened, to choose the points to which the wagons supplied will be loaded and there is no guarantee that, after the railway has gone to the trouble and expense of sorting out and supplying open wagons to collieries loading to the Docks, they will be utilised for this point. As has been stated in the answer to Question 26, loading is haphazard, the colliery studying only its own convenience.

29. Double wagon supply to collieries with mechanical loading.—A list of the collieries which have installed mechanical loading apparatus is at Appendix N.

It will be seen that in most instances the siding accommodation provided is in excess of the capacity of the plants and it would, therefore, be a simple matter to place at a single operation the entire number of empty wagons necessary to ensure full and continuous use of the plant. In this respect double supply, in the sense of supplying twice a day, does not therefore, appear to be essential. The problem, however, hinges on the capacity of the plants and the necessity for prompt clearances, and one of the following methods is open:—

- (a) to supply in one lot the full number of wagons required, allow 24 hours for loading and clear the wagons the next day.
- (b) to supply the full number in the morning, clear as many as are loaded after 10 hours and the remainder when making further supplies next morning.
- (c) to supply in the morning a portion of the number of wagons required, clear them after 10 hours, at the same time supplying the remainder, and clearing these next morning when making further supplies.

(a) This could be adopted on sections where the 20 hours system is worked to. No additional pilotage would be involved.

(b) This would suit the 10 hours pilots. The advantage of this is that no supplying work would be thrown on clearance pilots, though supply pilots would have to clear the wagons left over from the previous day and loaded at night.

(c) This would also suit the 10 hours pilots and appears the simpler course.

It must, of course, not be overlooked that these suggestions are dependent on the indents of a colliery fitted with mechanical loading plant being always met in full and this would mean that such collieries would be receiving a preferential allotment at periods when all indents were not being met in full.

With regard to the principle involved—to give collieries using mechanical loading appliances a double supply of wagons daily, irrespective of the purposes for which the wagons are required, would, when the railway is unable to meet all indents in full or is obliged to curtail loading to fit in with the capacity of the depôts, amount to preferential treatment. Such collieries would be placed at a considerable advantage over others and this would almost certainly cause an outcry from the trade.

The case may be summed up that, from a Railway point of view, there does not appear to be much difficulty in keeping collieries fitted with mechanical loading plant adequately supplied with wagons, but as this might prejudice the supply to other collieries, the matter is one on which the representative bodies should pass an opinion.

30. Possibility of stabling wagons in colliery sidings.—Owing to fluctuations, both numerical and in regard to points and directions, in the indents of collieries served by sidings on different pilot sections, the allotment of wagons for each pilot section is entirely uncertain. This uncertainty is increased by fluctuations in the wagon stock available and by the numerous restrictions imposed from day to day and until the yard master receives the supply sheets for the various pilot sections served by his depôt, he is ignorant of the number and types of wagons to be supplied on the various sections. Empties flow into the depôts, at all times of the day, and if these wagons are stabled "*ad libitum*" at colliery sidings as received, more empties than are actually required, may be stabled in one pilot sections and less in another. Again, collieries requiring certain types of wagons might not get them, they having been placed elsewhere. Large numbers of wagons would either remain idle for the day or extra work and expense be entailed in transferring them to the points where they could be utilised. Further, wagons which could not be used might have been placed in the siding of a particular colliery which requires the space for loading and these wagons would have to be drawn out and placed on a vacant siding. There might not be any large enough near by and the supplying pilot would either have to break up and shunt them to sidings which could hold them or else bring them back into the depôt.

Moreover, while empties are being received at depôts, pilots are working in sections and it would not always be possible to place these empties in sections as they are received. They would have to wait until the section was clear.

Twenty-hours pilots usually leave depôts between 7 A.M. and noon and are engaged in the section for approximately 12 hours, so that empties arriving during this time would have to remain at the depôt unless block huts were constructed at various points on the sections. This would mean pilots being longer hours on duty and irregularity in the time of placing of wagons at sidings.

Where the 10-hours system has been adopted, supply pilots leave depôts in the early hours of the morning and are usually 5 hours on duty. The drawing pilots leave depôts at about 5 P.M. so that the time the sections are clear of pilots is about 10 to 12 hours. This is the maximum, but in practice owing to the variations in the length of time pilots are on duty, it is frequently less.

During the period from 7 A.M. to 5 P.M. however, sidings are occupied with wagons being loaded and it may happen that only limited stabling space is available at separate points or at the end of the section, while during the period from 10 P.M. to 2 A.M. when the section is actually clear, no trains may arrive. Heavy additional pilotage would in any case be incurred.

However, on sections where the 10-hours system is in force, there are special stabling sidings and when loading is heavy the drawing pilots take out loads of 60, from among the wagons at the depôt at the time of their departure, and stable them in these sidings and the wagons are distributed by the supply pilots next morning. There is usually one such siding on each pilot section where the 10-hours system is worked to. The extent to which stabling of empties in sidings is possible is, therefore, limited to 60 on each pilot section. This figure of 60 is only a portion of the total number of wagons required on the section. No additional pilotage is incurred.

The capacity of the various depôts has not been fixed only on the number of empties which can be received, but also on the marshalling, despatching and transit facilities in and on both sides of the coalfields and unless these facilities are increased, an increase in the number of wagons loaded on any one day assuming the proposal would effect this, would only result in congestion.

For these reasons the proposal is impracticable.

31. Splitting up of rakes among collieries on the same pilot section.— There are the following objections to splitting up rakes and half rakes among a large number of collieries, even if they are on the same pilot section, in addition to the fact that the work of supplying wagons to a large number of collieries and collecting them when loaded would tend to congest the pilot section and increase the cost of working.

In the first place each colliery sharing in the rake would have to indent simultaneously with the others for its share of the rake and the larger the number of collieries sharing in each rake, the greater the improbability of their being able to work in concert.

The checking of indents would become involved. If in the indent of one colliery it was noticed that a part rake had been indented for, it would be necessary to check the indents of the remaining collieries sharing in the rake to see whether they had also indented. To do so, a reference would either have to be made to the Coal Transportation Officer's authorisations or a remark made in the ledgers against each of the names of the various collieries to whom the half rake had been authorised jointly. It would further be necessary to see whether the allotment made to each colliery on other accounts, such as Loco., Specials, etc., allowed siding space for its share of the half rake. Such work has now to be done in cases where the splitting up of rakes to collieries under the same management is permitted, but if any extension of this concession is made, the work of checking of indents will be considerably magnified. With the authorisation of a large number of such rakes and half rakes, it is easy to realise the confusion and general slowing down which would be caused to work, which has to be got through in a limited time.

If, moreover, one colliery failed to indent, submitted an irregular indent, had no siding space spare on the day, or had its supplies stopped for non-payment of freight, etc., the indents of all the remaining collieries sharing in the rake would have to be rejected and this would certainly result in complaint.

In the supply memo. distinguishing marks would have to be made against the entries of the wagons which had been allotted as parts of a rake as there would be no limit to the various combinations which could be made and, unless the number of such rakes was strictly limited, confusion would arise as to which wagons formed part of which rake.

The guard of the clearance pilot would also have to be made aware of the various sidings at which the different sections of a certain rake had been placed to enable him to combine them before bringing his load into the dépôt.

In spite of all these precautions to ensure that the component parts of a half rake are collected, one or more of the collieries may not load its portion of the half rake in time. The wagons would have to be left behind for another day and the half rake thus be broken up.

There would also be interminable shunting on the section to keep the "rake" wagons together:

For instance—

- (a) Sidings on which part rakes are being loaded may possibly have other supplies and it would be a difficult and lengthy proceeding to sort out the "rake" wagons from the wagons for other destinations.
- (b) There is the possibility of wagons being loaded at sidings situated between the sidings on which part rakes are being loaded and to draw and collect these wagons might easily become an impossibility. This additional shunting would increase by a large figure the pilot engine hours, which must result in congestion on the sections.

At present, two or three collieries, not more, under the same management or proprietor and served by sidings on the one pilot section are permitted to

share in the loading of a rake or half rake. The difficulty of indenting in concert does not arise nor that of arranging an adequate labour supply simultaneously, as would be the case with collieries under different managements or proprietors with different interests to serve.

It is true that the work detailed in the preceding paragraphs has, to some extent, to be done now when half rakes are allotted jointly as above, but it is limited to manageable proportions by the conditions imposed. There can be practically no variation in the combinations permitted. The number of collieries answering the conditions is small and not more than one joint half rake is usually supplied on any day on a pilot section.

The allotment and pilot staff are soon able to memorise the names of the collieries which may combine and once one joint half rake has been dealt with, the work in connection with others is merely a repetition of that done before and is, therefore, easily performed.

If, however, *any and every* combination is permitted, the work of checking indents will be considerably magnified and it would be impossible to get through with allotments in the time available. The number of collieries on each pilot section varies between 60 and 100 and the number of combinations that would be possible is almost beyond computation.

32. Objection to issuing several railway receipts for rakes and half rakes.—The suggestion that more than one railway receipt should be issued in the case of rakes and half rakes loaded to one consignee at one destination so as to enable the consignee to hand over a separate railway receipt to each of his customers in return for payment for the coal, is not one which the Railway would refuse to entertain.

The consent of the Railway to the adoption of the half rake system was given on the understanding that work on pilot sections and at depôt stations would be considerably reduced.

Invoicing is part of the work performed at depôt stations and the issue of only one declaration note and invoice for each half rake was implied, as the only possible means by which work at weighbridge could be reduced.

The strict application of this understanding has not, however, been insisted upon and declaration notes are accepted and invoices issued for as many consignees and destinations as are mentioned in the authorisation letters of the Coal Transportation Officer.

To permit the tendering of 25 declaration notes and to agree to the issue of the same number of invoices for the one half rake, will completely nullify one of the advantages of the half rake system.

The Railway, however, is prepared to waive this objection if the issue of separate invoices is considered to be in the interest of the trade.

(iv) Prepayment of freight.

33. Objections to return to "freight to pay" system.—The circumstances which led up to the introduction of the system of compulsory prepayment of freight on coal from 1st December 1917 are summarised below:—

Owing to the low intrinsic value of coal, it often happened, especially when traffic was booked long distances, that the railway freight due exceeded the value of the coal and if the consignee had not paid for the coal and did not find it to his advantage, he did not apply for delivery. Rejections usually occurred when the market was overstocked and there was a consequent fall in price. There were such violent fluctuations in the price of coal that it sometimes happened that coal could be obtained locally for a smaller sum than would have to be paid as freight alone. Railways had invariably to sell rejected coal by public auction in an already depressed market and with the "buying ring" against the Railway, the figure obtained for the coal was always considerably lower than the amount due as freight. It was suspected that quite apart from market conditions, certain merchants declined to accept and pay freight on a consignment, knowing quite well that the coal would

have to go to auction and then they would arrange matters to their entire satisfaction and profit.

Certain railways experienced heavy losses in this respect and during the years 1911—1916, when the situation became serious, it was arranged at the request of the railways concerned that freight on coal booked to certain stations, where rejections were of frequent occurrence, should be prepaid. The number of these stations was:—

	Stations.
N. W. Railway	35
O. and R. Railway	2
R. and K. Railway	All
E. B. Railway	8
J. B. Railway	5
C. P. C. Railway	All
E. I. Railway	

Rejections occurred at other points too but not quite to the extent to necessitate prepayment of freight being insisted upon.

With effect from 1st December 1917, on the recommendation of the Committee to Regulate Coal Supplies the prepayment of freight on all coal was made compulsory and this is still in force.

The objections to the reversion to the previous system may be summed up as follows:—

I. The circumstances which necessitated prepayment of freight being made compulsory, are still to be found, as the appended extract from the proceedings of a recent meeting of the Indian Mining Association shows:

“ Rejection of coal at destination.—In a letter dated 23rd August 1924 a member stated that their experience of late had shown that, in a falling market and principally among Indian buyers, coal was being frequently rejected at destination on the plea that it contain too much slack or that the loading was bad. There appeared to be some doubt as to the interpretation which the Board of Arbitration would place upon the liability of the sellers under the contract; and the member contended that the responsibility of the sellers ceases when the coal has left the colliery, it always being open to buyers to inspect wagons before despatch. The member added that it would assist them considerably if the Association would enforce this view in order that they might know what attitude to adopt when such complaints arose.”

II. The trade itself is chary of allowing credit to consumers up country, as is evidenced from the large number of applications continually received from such firms to be allowed to pay freight on bills. In these applications definite mention is made of the fact that collieries require orders to be accompanied by an amount sufficient to cover freight.

III. The prepayment system is intended as a safeguard against consignees defaulting for freight. There is no other method, by which the Railway can protect itself and it is open to collieries (it is in fact done) to impose the same conditions on consumers, who are the principal delinquents.

IV. There is no real hardship imposed by the condition of prepayment of freight as it is ameliorated to a great extent by the fact that collieries and firms, desiring to do so, are allowed to pay freight by cheques on presentation of bills, when more than two weeks credit is allowed.

(xv) Sidings.

34. Applications for sidings.—Applications for sidings are usually addressed to the Agent and are forwarded through the General Traffic Manager and the Coal Manager to the District Superintendent for report on the property for

which a siding has been asked. Detailed information in regard to this property has to be submitted by the District Superintendent to the Coal Manager on a special form, a specimen of which is at Appendix O.

The main considerations which influence recommendations are:—

- (i) What extent of siding accommodation is required to despatch the daily raisings of the colliery?
- (ii) Can the colliery be suitably served both from the point of view of the railway and the proprietors by an existing siding located near by?
- (iii) If not, does the extent of accommodation necessary justify the construction of a separate siding for the colliery?
- (iv) Would it be more advisable in view of the fact that there may be adjacent collieries also requiring accommodation (and more about to open out) to construct a railway siding to accommodate all?
- (v) If this latter consideration does not outweigh that of finance, which the railway has to provide for the construction of railway sidings, it is usually considered advisable to construct a joint assisted siding for all the applicants requiring accommodation.
- (vi) When, however, there are no properties near by requiring siding space and financial stringency precludes the construction of sidings either as railway or assisted sidings, private sidings are put in and the applicant has to pay the entire cost.

The pros and cons of each application are considered on these lines and recommendations are then made to the Agent. Should the construction of a siding be recommended and the Agent accept the General Traffic Manager's views and should the Railway's Colliery Superintendent certify that there is no objection from the point of view of underground support, the applicant is required to pay a survey fee and the Chief Engineer is then asked to prepare a plan and estimate. If these are accepted by the applicant, the amount payable by him has next to be deposited and the necessary agreement signed. The work is then put in hand.

35. Number of colliery sidings.—The number and mileage of each class of colliery sidings on the East Indian Railway are:—

	No.	Mileage.
Assisted sidings	446	137.64
Railway sidings	79	31.72
Private sidings	25	16.45
	—	—
TOTAL	550	185.81
	—	—

36. Different classes of sidings.—*Assisted Sidings.*—Generally speaking, the existing policy is to provide an assisted siding if the output of the colliery is likely to reach an amount sufficient to furnish such additional traffic receipts as will pay interest on the Capital expenditure falling on the Railway. As a rule, the output required is not large and this system has in the past undoubtedly done much to encourage and develop traffic to the benefit of both colliery owners and the Railway.

Railway Sidings.—These are sometimes provided when loading accommodation has to be found for a large number of small collieries close together and when it is advisable that the railway should keep entirely in its own hands the right of varying from time to time the extent of the loading accommodation

which in its opinion is necessary to meet the needs of the various concerns. Such sidings are constructed on land which has been acquired by the Railway at its own cost, and it recovers from the concerns to whom loading space is allotted at the siding a charge of Rs. 3-8-0 a month per wagon length allotted.

Private Sidings.—The majority of these consists of sidings put in before the policy of assisted sidings came into force. Occasionally, however, either owing to the difficulty of providing funds from the budget or because it is doubtful if the expenditure involved is likely to be remunerative to the Railway, collieries requiring sidings are told that they can only be given them if they are put in as private sidings. The whole construction cost of a private siding (including the cost of the permanent way) is borne by the colliery concerned, except that the connections between the private siding and the main line are put in on assisted siding terms. The land on which a private siding is laid remains the property of the colliery. The maintenance of private sidings is, as a rule, carried out by the Railway at the cost of the owner of the siding, to ensure that it is kept up to the standard necessary for the safe movement of rolling stock and the Railway reserves the right to stop supplies if in its opinion the underground “support” is unsatisfactory, or if in any other respects (lack of drainage, fixed structure within the minimum dimensions, etc.) the siding is unsafe for traffic. Beyond this, however, the Railway has no rights of interference and loading accommodation on a private siding remains solely the concern of the owning colliery.

(xvi) *Preferential wagon supply for export and bunker coal.*

37. Preferential wagon supply for export and bunker coal.—From the point of view of this Railway, there seems no reason to oppose the suggestion, provided that the extent to which preferential treatment is given is not such as to sacrifice unduly the interests of consumers in this country. Whether the suggestion could be adopted without entailing serious consequences to consumers in India appears to be doubtful and the matter is one that should be referred to representative bodies such as Chambers of Commerce.

38. Possibility of preference being conditional on not over-indenting.—This would not, it is thought, be necessary as if preferential treatment was allowed to coal despatches to the Kidderpore Docks, the authorisation issued by the Coal Transportation Officer would state the number of wagons to be supplied.

39. Possibility of preferential supply being cumulative.—The adjustment subsequently of supplies received under preferential orders has been tried before and proved a failure for the reason that only particular collieries are able to obtain such orders and are repeatedly granted authorisations far in excess of their dues on basis and it is, therefore, impossible to equalise without an eventual total stoppage of supplies of empty wagons to such collieries for considerable periods. The alternative would be a continually increasing debit which would have to be carried forward perpetually or written off periodically.

(xvii) *Coal Transportation Officer.*

40. Value of Coal Transportation Officer to the Railway.—The railway administration can effectively and, in fact, do in actual practice all that is necessary in regard to the distribution of wagons, but the work of the Coal Transportation Officer in its present form goes further than the distribution of wagons. It provides for preferential treatment under certain conditions—in other words, it takes the form of rationing coal at times when coal supplies are below public requirements.

This preferential treatment or rationing is the crux of the whole question.

The public, whether as consumers or despatchers of coal, are invariably suspicious of railway administrations and their officials when any question of

special help arises. They are not suspicious of an official appointed by Government for that particular purpose.

Until coal shortage can be eradicated entirely, it seems advisable in the interest of the public as well as of the railway that the present work of the Coal Transportation Officer should continue, because he is the one official to whom the proprietor or manager of a coal consuming concern can go to receive immediate assistance when there is danger of his concern being stopped for want of coal.

If the coal export business revives, assistance will undoubtedly be required from time to time when steamers are declared ready for loading. In this respect also the Coal Transportation Officer would be of service to Shippers.

41. Opinion as to retention of Coal Transportation Officer.—We are in favour of the continuance of the appointment for reasons given in previous answer.

(xviii) Preferential transport for export and bunker coal.

24. Possibility of preference en route to goods trains with export or bunker coal.—The maximum train passing capacity of a double line section is only attained when all the trains passing over the section are timed at a uniform speed. The further this condition is departed from, the more the maximum train passing capacity is reduced.

If preference is to be given to trains carrying export and bunker coal, there are serious objections as other trains carrying merchandise and miscellaneous traffic must give way and this means long hours on the road for such trains. It might also lead to trains stabling and this would result in complaints from the public with regard to delay to goods. From a railway point of view, goods traffic is more paying than coal and it is difficult to see why coal traffic should be given preferential treatment in the matter of transport.

(xix) Opening of steamer berths.

43. Opening of steamer berths.—Usually berths are declared open 6 days before the anticipated date of arrival of a steamer, though the time varies from 4 to 10 days, and provided collieries have previously been advised and are indenting when the notice is received, six days is ample.

(xx) Mechanical loading and unloading appliances at the docks.

44. Mechanical unloading appliances at the docks.—(a) We are strongly in favour of mechanical unloading appliances at the docks, to suit all types of wagons, for the reason that it would not then be necessary to sort opens and certain types for collieries loading to the Docks.

(b) We should favour appliances to suit all types of open wagon, if appliances to suit all types of wagons cannot be installed.

(c) We are not in favour of appliances to suit only one type of wagons.

45. Objection to mechanical unloading plant suited only to a special type of wagon.—A mechanical loading appliance which could only deal with a special type of wagon would very seriously reduce the capacity in the coalfields, as it would entail extra work in sorting out and supplying the wagons of a special type to the collieries.

46. Unloading appliance at Cossipore Power House.—We have inspected this appliance. The following is a brief description of the unloading apparatus and the method of working it:—

It consists of a side-tilting table which is elevated from rail level to a height of about 30 feet by means of steel wire ropes and revolving

drums on which the ropes wind. A vehicle is run on to the table which is then given a slight tilt so that the side of the vehicle rests against two wide buffers padded with rope. In this position the vehicle is raised to the full extent of the overhead gear, the vehicle door cotters are released and the vehicle is tilted still further—if a covered wagon to an angle of 45° and if an open truck to an angle of more than 90° —and the coal shot out. Attached to the superstructure is a large bin into which the coal is shot.

With covered wagons it is necessary for a man to get inside the wagon to shovel out coal from the corners, but with open trucks no man-handling is required. When the vehicle is tilted into the shooting position it is steadied by two more padded arms or buffers. The time taken to discharge an open truck is about 5 minutes and a covered wagon about 20 minutes.

The bin is actually a hopper from which the coal pours into a crushing machine and thence it falls on to a belt conveyor which carries it to a large open bin. From this second bin the coal is conveyed to the boilers by means of a $1\frac{1}{2}$ ton grab suspended from an elevated track.

The whole is worked by electricity.

The adoption of a similar contrivance with its accompanying bins (the provision of crushers is a matter for experts to decide) at the Kidderpore Docks is for the Port Commissioners to determine. The East Indian Railway has no objection from a mechanical working point of view to its installation.

It should, however, be noted that the table of the Cossipore unloading plant is capable of taking wagons up to a maximum length of 23 feet 5 inches, whereas the lengths of wagons now go up to 26 feet, which is the standard now in vogue for calculating train lengths and siding accommodation in the Coal Fields. It is understood that the table at Cossipore can be lengthened to 27 feet 2 inches, but at considerable expense.

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(xxi) *Demurrage at the docks.*

47. Recovery of demurrage from Port Commissioners.—The recovery of hire and demurrage from the Port Commissioners on wagons detained at the Docks is governed by an agreement with the Port Commissioners which came into force from 1st March 1922.

Under this agreement the goods stock of the East Indian Railway and Foreign Railways is allowed to remain on the Port Commissioners' Railway 48 hours free of hire, after which hire charges are levied at the rate of 1 anna 8 pies per hour for a four-wheeled vehicle and 3 annas 4 pies per hour for a bogie vehicle. Hire is paid on the aggregate time wagons are on the Commissioners' Railway during each month less the aggregate free time of 48 hours per wagon. The number of hours each wagon is on the Commissioners' Railway is calculated from the time the wagon arrives in the reception lines of the Commissioners' Railway to the time the wagon is placed in the departure sidings of the Commissioners' Railway, which particulars are shewn in the Kidderpore Dock Junction Returns received monthly from the Dock Superintendent, Kidderpore.

Where the demurrage collected in any one month by the Commissioners from the Public on wagons belonging to the East Indian and connected Railways, exceeds the amount of hire paid by the Commissioners, the excess is payable to the East Indian Railway.

In actual practice it is found that the aggregate detention of all wagons is covered by the aggregate free time (see answer to Question 7) so that the Port

Commissioners pay no hire but only the demurrage charges realised from the Public.

48. Details of demurrage levied.—The required statement is given below:—

	Total number of wagons received at Docks including Jetties.	No. of wagons on which demurrage charge is accrued.	Total paid to E. I. Rail- way.	AMOUNT,		Percentage of the number of wagons incurring de- murrage to the total number of wagons re- ceived.	REMARKS.
				Hire.	Demurrage.		
			Rs. a. p.	Rs. a. p.	Rs. a. p.		
1921-22.							
April 1921 to February 1922	95,058	2,933	10,602 12 0	304 14 0	10,602 14 0	3.07%	Old arrangement.*
March 1922	3,237	40	84 0 0	.....	84 0 0	1.47%	Present arrange- ment introduced on and from 1st March 1922.
	98,995	2,987	11,081 12 0	304 14 0	10,680 14 0	3.02%	
1922-23 . .	100,336	746	3,384 1 0	61 4 0	3,323 0 0	.74%	
1923-24 . .	112,619	710	3,713 10 0	.....	3,713 10 0	.59%	„

*Note.—Wagons at Docks.—Demurrage was charged on E. I. Railway stock @ 1 pie per ton hour and on Foreign Stock @ 4 pies per ton hour for any detention in excess of 6 hours for return empties and 80 hours for return loads.

Wagons at Jetties via Docks.—On E. I. R. wagons, there is an all round hire charge of 1 anna per wagon to cover a period of 48 hours for return empties and 72 hours for return loads and demurrage @ 4 pies per ton hour for any detention in excess of 48 or 72 hours as the case may be, whereas in case of Foreign Stock the same charge is made as under the old Conference Rule 14 (C) of 1910.

(xxii) *Railway freights and terminal charges.*

49. **Rates and terminals for export and bunker coal sent to Calcutta.**—
Statement showing rates for (1) Export Coal and (2) Bunker Coal to Calcutta.
(Kidderpore Docks).

FROM JHEBBIAH.

Rate per ton.

Year.	Export Coal.					Bunker Coal.					REMARKS.
	Actual rate at scale.	Colliery end terminal.	Calcutta end terminal.	Less rebate allowed.	Ultimate total rate.	Actual rate at scale.	Colliery end terminal.	Calcutta end terminal.	Total rate per ton.		
	Rs. a. p.	As. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	As. p.	Rs. a. p.	Rs. a. p.		
1912	3 2 0	.....	.....	0 11 0	2 7 0	3 2 0	.....	.....	3 2 0	
1913	3 2 0	.....	.....	0 11 0	2 7 0	3 2 0	.....	.....	3 2 0	
1914	3 2 0	.....	.....	0 11 0	2 7 0	3 2 0	.....	.....	3 2 0	
1915	3 2 0	.....	.....	0 11 0	2 7 0	3 2 0	.....	.....	3 2 0	
1916	3 2 0	.....	.....	0 11 0	2 7 0	3 2 0	.....	.....	3 2 0	
1917*	3 2 0	2 0	.....	0 11 0	2 9 0	3 2 0	2 0	.....	3 4 0	
1918*	3 2 0	2 0	.....	0 11 0	2 9 0	3 2 0	2 0	.....	3 4 0	
1919*	3 2 0	2 0	.....	0 11 0	2 9 0	3 2 0	2 0	.....	3 4 0	†
1920*	3 8 0	2 0	.....	0 15 0	2 9 0	3 8 0	2 0	.....	3 8 0	From 1st Apr. 1920.
	3 8 0	2 0	.....	.....	3 8 0	3 8 0	2 0	.....	3 8 0	From 1st Sep. 1920.
1921*	3 11 0	2 0	.....	.....	3 13 0	3 11 0	2 0	.....	3 13 0	From 1st Apr. 1921.
1922	4 0 0	2 0	0 4 6	.....	4 6 6	4 0 0	2 0	0 4 6	4 6 6	From 1st Apr. 1922.
	4 0 0	4 0	0 4 6	.....	4 8 6	4 0 0	4 0	0 4 6	4 8 6	From 1st May 1922.
1923	4 0 0	4 0	0 4 6	.....	4 8 6	4 0 0	4 0	0 4 6	4 8 6	...
1924	4 0 0	4 0	0 4 6	1 0 0	3 9 6	4 0 0	4 0	0 4 6	4 8 6	From 1st Jan. 1924.	

* These rates are exclusive of the following Government Surcharge tax leviable on Coal :—

(i) From 1st April 1917 to 31st March 1921 . . . Re. 0-2-3 per ton.

(ii) From 1st April 1921 to 31st March 1922 . . . Re. 0-2-6 per rupee of freight payable.

† During this period rebate was allowed only on Coal (excluding Bunker Coal) exported to Burma and Ports outside India.

Statement showing rates for (1) Export Coal and (2) Bunker Coal to Calcutta (Kidderpore Docks).

FROM RANEEGUNGE.

Rate per ton.

Year.	Export Coal.					Bunker Coal.					REMARKS.
	Actual rate at scale.	Colliery end terminal.	Calcutta end terminal.	Less rebate allowed.	Ultimate total rate.	Actual rate at scale.	Colliery end terminal.	Calcutta end terminal.	Total rate per ton.		
	Rs. a. p.	A. p.	Rs. a. p.	As. p.	Rs. a. p.	Rs. a. p.	As. p.	Rs. a. p.	Rs. a. p.		
1912	2 4 0	...	...	9 0	1 11 0	2 4 0	...	...	2 4 0	
1913	2 4 0	...	...	9 0	1 11 0	2 4 0	...	...	2 4 0	
1914	2 4 0	...	...	9 0	1 11 0	2 4 0	...	...	2 4 0	
1915	2 4 0	...	...	9 0	1 11 0	2 4 0	...	...	2 4 0	
1916	2 4 0	...	...	9 0	1 11 0	2 4 0	...	...	2 4 0	
1917*	2 4 0	2 0	...	9 0	1 13 0	2 4 0	2 0	...	2 6 0		
1918*	2 4 0	2 0	...	9 0	1 13 0	2 4 0	2 0	...	2 6 0		
1919*	2 4 0	2 0	...	9 0	1 13 0	2 4 0	2 0	...	2 6 0		
1920*	2 0 0	3 0	...	14 0	1 13 0	2 9 0	2 0	...	2 11 0	From 1st Apl. 1920.	
	2 9 0	2 0	...	...	2 11 0	2 9 0	2 0	...	2 11 0	From 1st Sep. 1920.
1921*	2 0 0	2 0	...	...	2 11 0	2 9 0	2 0	...	2 11 0	From 1st Apl. 1921.
1922	2 13 0	3 0	0 4 6	...	3 3 6	2 13 0	2 0	0 4 6	3 3 6	From 1st Apl. 1922.	
	2 13 0	4 0	0 4 6	...	3 5 6	2 13 0	4 0	0 4 6	3 5 6	From 1st May 1922.	
1923	2 13 0	4 0	0 4 6	...	3 5 6	2 13 0	4 0	0 4 6	3 5 6		
1924	2 13 0	4 0	0 4 6	11 8	2 10 0	2 13 3	4 0	0 4 6	3 5 6	From 1st Jan. 1924.	

* These rates are exclusive of the following Government Surcharge tax leviable on Coal :—

(i) From 1st April 1917 to 31st March 1921 . . . Re. 0-2-3 per ton.

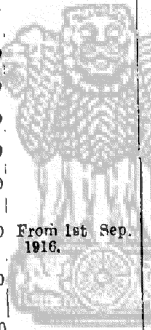
(ii) From 1st April 1921 to 31st March 1922 . . . Re. 0-2-6 per rupee of freight payable.

+ During this period rebate was allowed only on Coal (excluding Bunker Coal) exported to Burma and Ports outside India.

50. Rates and terminals for coal sent to and from other ports.—(a) Statement showing rates for Public Coal to Indian Ports other than Calcutta by all-rail-route with the East Indian Railway proportions separately.

FROM JHERIAH.

Rate per ton.

Year.	To Bombay (<i>via</i> Jubbulpore).			REMARKS.	To Madras (<i>via</i> Asansol and Waltair).			REMARKS.
	E. I. Ry. proportions including Colliery end terminal.	Colliery end terminal.	Total rate per ton.		E. I. Ry. proportions including Colliery end terminal.	Colliery end terminal.	Total rate per ton.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	
1912	5 10 0	...	11 4 0		0 3 8	...	10 6 0	} <i>Via</i> Gomoh and Waltair.
1913	5 2 7	...	11 4 0		0 3 8	...	10 6 0	
1914	5 2 7	...	11 4 0		0 3 8	...	10 6 0	
1915	5 2 7	...	11 4 0		0 6 2	...	10 6 0	
1916	5 2 7	...	11 4 0		0 6 2	...	10 6 0	
	5 5 2	0 2 0	12 2 0	From 1st Sep. 1916.	...	...	...
1917*	5 5 2	0 2 0	12 2 0		0 8 2	0 2 0	10 10 0	
1918*	5 5 2	0 2 0	12 2 0		0 8 2	0 2 0	10 14 0	From 1st Dec. 1917.
1919*	5 5 3	0 2 0	12 2 0		0 8 0	0 2 0	10 14 0	From 1st May 1919.
1920*	5 14 11	0 2 0	12 12 0	From 1st Apl. 1920.	0 8 4	0 2 0	11 7 0	From 1st April 1920.
1921*	6 12 4	0 2 0	14 10 0	From 1st Apl. 1921.	0 9 9	0 2 0	13 13 0	From 1st April 1921.
	6 12 4	0 2 0	15 2 0	From 1st Oct. 1921.	...	...	...
1922	6 12 4	6 2 0	15 4 0	From 1st Jan. 1922.	0 9 9	0 2 0	13 13 0	
	6 14 4	0 4 0	15 6 0	From 1st May 1922.	0 11 9	0 4 0	13 15 0	From 1st May 1922.
1923	6 14 4	0 4 0	15 6 0		0 11 9	0 4 0	13 15 0	
1924	6 14 4	0 4 0	15 6 0		0 11 9	0 4 0	13 15 0	

* These rates are exclusive of the following Government Surcharge tax leviable on Coal :—

- (i) From 1st April 1917 to 31st March 1921 : Re. 0-2-3 per ton.
(ii) From 1st April 1921 to 31st March 1922 : Re. 0-2-6 per rupee of freight payable.

(b) The statement in paragraph (c) has been submitted by the G. I. P. Railway in respect of rates levied on Public Coal from Bombay to certain internal G. I. P. Railway stations. Statements provided by the B. & C. I., N. W. and M. S. M. Railways are at Appendices P, Q and R respectively.

(c) Rates for public coal from Bombay to the undernoted G. I. P. Railway stations from 1912 to date.

Station to	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Up to 31st March 1920.	From 1st April 1920.	From 1st November 1920.	From 1st April 1921.	From 1st October 1921.	From 1st April 1922 up to date.
	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.	Rs. a. p. per ton.
Kardawadi	4 8 0	4 8 0	4 8 0	4 8 0	4 8 0	4 8 0	4 8 0	4 8 0	4 8 0	4 14 0	5 0 0	5 9 0	6 3 0	6 12 0
Via Kardawadi	...	4 10 3	4 10 3	4 10 3	4 10 3	4 10 3	4 10 3	4 10 3	4 10 3	5 0 3	5 0 3	5 9 3	6 3 3	6 10 0
Kurda	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	1 1 0	1 3 0	1 3 0	1 3 0	1 11 0	1 13 0
Via Kurda	...	...	...	...	...	...	...	...	1 1 0	1 3 0	1 3 0	1 3 0	1 11 0	1 13 0
Sholapur	3 3 6	3 3 6	3 3 6	3 3 6	3 3 6	3 3 6	3 3 6	3 3 6	4 13 0	5 3 0	5 5 0	6 9 0	7 3 0	7 12 0
Kardawadi	3 2 11	3 2 11	3 2 11	3 2 11	3 2 11	3 2 11	3 2 11	3 2 11	...	...	...	...	...	...
Poota	0 1 6	0 1 6	0 1 6	0 1 6	0 1 6	0 1 6	0 1 6	0 1 6	2 12 0	3 1 0	3 3 0	3 5 0	3 16 0	4 5 0
Kirkee	0 1 5	0 1 5	0 1 5	0 1 5	0 1 5	0 1 5	0 1 5	0 1 5	2 10 0	3 1 0	3 3 0	3 3 0	3 13 0	4 3 0
Lonarla	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	2 1 0	2 5 0	2 7 0	2 7 0	3 1 0	3 6 0
Thana	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	1 1 0	1 3 0	1 5 0	1 5 0	1 15 0	2 1 0
Kurda	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	...	...	...	...	...	...
Via Kurda	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	...	...	...	...	...	...
Dadar	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	0 0 4	1 1 0	1 3 0	1 5 0	1 5 0	1 15 0	2 1 0
Agra Fort	...	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	9 0 0	9 11 0	9 13 0	11 15 0	12 9 0	12 11 0
Belarganj	...	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	9 0 0	9 11 0	9 13 0	11 15 0	12 9 0	12 11 0
Agra Cantt.	...	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	9 0 0	9 11 0	9 13 0	11 15 0	12 9 0	12 11 0
Blochpura	...	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	0 3 8	9 0 0	9 11 0	9 13 0	11 15 0	12 9 0	12 11 0

NOTE.—Rates for 1912 excluded as the G. I. P. Railway state their tariff for this year is not available.

51. **Classification of coal for rate charging.**—Coal is classified First class Railway Risk. First class goods rates are subject to the minimum charge of 10 pie per maund per mile and the maximum charge of 38 pie per maund per mile. For the purposes for charging rates on public coal, in full wagon loads, however, the following maxima and minima rates have been fixed :—

Maximum Rates.

	Pie per maund per mile.
For the first 200 miles	0.165
Plus from 201 miles up to 400 miles inclusive . .	0.15
<i>Plus</i> from 401 miles upwards	0.10

Minimum Rates.

For the first 300 miles	0.10
<i>Plus</i> from 301 miles up to 500 miles, inclusive . .	0.066
<i>Plus</i> from 501 miles upwards	0.05

Within the maxima and minima scales shown above, however, the scale actually operating for the carriage of Public coal at owner's risk is :—

	Pie per maund per mile.
(i) For traffic carried for distances 400 miles and under :—	
For all distances up to 200 miles inclusive . .	0.165
<i>Plus</i> for any distance in excess of 200 miles and up to 400 miles inclusive	0.13
(ii) For traffic carried for distances over 400 miles :—	
For all distances up to 200 miles, inclusive . .	0.15
<i>Plus</i> for distances in excess of 200 miles and up to 300 miles inclusive	0.13
<i>Plus</i> for distances in excess of 300 miles and up to 400 miles inclusive	0.07
<i>Plus</i> for distances in excess of 400 miles	0.06

The rate for 401 miles calculated at the basis of charges shown under (ii) will be applied differentially to distances less than 401 miles wherever cheaper.

In respect to general mineral class goods, the East Indian Railway charge their "B" Schedule rate, the basis of which is noted below, on C. C. of stock used for the following, viz., Chalk, Clay, Earth N. O. C., Fireclay, Lime, Limestone, Ores common N.O.C., Slates and Steatite (Soapstone).

BASIS FOR CHARGE OF SCHEDULE "B" RATE.

	Pie per maund per mile.
For the first and up to 75 miles	30
For extra distances above 75 miles not exceeding 300 miles to be added to the charge for 75 miles . .	17
For extra distances above 300 miles not exceeding 500 miles to be added to the charge for 300 miles .	12
For extra distances above 500 miles to be added to the charge for 500 miles	10

It will be observed these minerals bear much higher freight charge than Coal.

The class rates levied in respect to other commodities over the East Indian Railway are calculated on the undernoted basis of charge:—

	Pie per maund per mile.
1st class	·38
2nd „	·42
3rd „	·58
4th „	·62
5th „	·77
6th „	·83
7th „	·96
8th „	1·04
9th „	1·25
10th „	1·87

52. **Variations in charges on export and bunker coal.**—Read in conjunction with answer to Question 49. The variations in the rates for export and bunker coal were as shown below:—

(a) *Re Export Coal.*—The rates for export coal illustrated in the statement show that rebate was allowed:—

- (i) From 1912 to 1916—on coal exported to Ports in or outside India.
- (ii) From 1st January 1917 to 31st August 1920—on coal exported to Burma and Ports outside India.
- (iii) From 1st September 1920 to 31st December 1923—no rebate was allowed on export coal.
- (iv) From 1st January 1924 up to date—on coal exported to Ports in or outside India.

These variations were introduced to suit the changing economic and other conditions brought about by the War. A complete withdrawal in 1920 of rebate on export coal was introduced to meet the increased working cost; not only had wages to be enhanced to meet the increased cost of living but the price of all materials and stores had risen to a very high figure as a result of the conditions brought about by the War. The re-introduction of a rebate was to encourage the export of coal with a view to the recapture of the overseas markets lost to South African and English coal.

Note.—At this point it should be stated that on and from 24th July 1920, the Government of India decided that all coal leaving the Port of Calcutta by sea for whatever destination should be covered by a license. On and from 1st April 1922, all restriction on the exportation of Coal by sea to Ports in India were removed. On and from 1st January 1923, the embargo on export coal generally was entirely removed.

During the period January to June 1924, the total traffic from the East Indian Railway carried to Kidderpore Docks was:—

754,075 tons

while the traffic for the corresponding period of 1923 amounted to:—

552,527 tons.

The additional traffic for the first half-year of 1924 was 201,548 tons.

The increased earnings on the additional weight carried, excluding Terminals both at the forwarding and receiving ends, is Rs. 6,65,273. Out of this sum the amount paid out as rebate is approximately Rs. 5 lakhs. The net increase in earnings is about Rs. 1,65,273.

It is doubtful, after making allowance for the working expenses, whether the additional traffic carried in the first six months of 1924 is sufficient to compensate the Railway for the cost involved in giving the rebate.

(b) *Re Bunker coal*.—The basis for charge for bunker coal despatched to Howrah and Calcutta during the period from 1912 to 31st March 1920 was:—

	Pie per maund per mile.
For first 75 miles	0-14
Plus from 76 miles to 200 miles inclusive	0-12

On 1st January 1917, a colliery end terminal charge of Re. 0-2-0 per ton was introduced to cover the increased cost of providing better facilities in the coalfields. This accounts for the first variation in the rate for bunker coal in 1917. In April 1920, the rates for public coal as quoted above were superseded by the following enhanced scale of charges, in order to meet the increased working costs brought about by the war:—

	Pie per maund per mile.
For the first 100 miles	0-15
Plus from 101 miles to 200 miles inclusive	0-125

This accounts for the next variation.

As it was subsequently found that the enhancement effected was not quite in proportion to the rise in the working costs on the East Indian Railway, the rate was further increased and the following scale of charges for public coal to Howrah and Calcutta was introduced from 1st April 1921:—

	Pie per maund per mile.
For all distances up to 200 miles	0-15

The next variation was due to this enhancement in public coal rates.

The footnotes in the three statements printed in answer to Question 49 and 50 will show that during the period from 1st April 1917 to 31st March 1922, a Government surcharge tax was collected separately in addition to the railway charges for carriage. Although the surcharge tax was withdrawn from 1st April 1922, the railway was required, in order to meet the previous yield to Government from the surcharge levied, to increase rates, the primary object of the enhancement in rates being the replacement of the surcharge as a means for increasing the revenue of the Government of India. With a view to meet this demand the railway rate for the carriage of public coal for short distances was enhanced to 0-165 pie per maund per mile up to 200 miles. At this period the Commissioners for the Port of Calcutta also demanded a payment of Re. 0-9-1 per ton terminal on all goods including coal booked to Kidderpore Docks. Hitherto this railway had been paying to the Commissioners a terminal charge of Re. 0-4-6 per ton on all goods including coal booked to Kidderpore Docks out of their revenue. With a view to meet this demand for payment of an extra Re. 0-4-7 per ton a receiving end terminal charge of Re. 0-4-6 per ton on all coal booked to Howrah and Calcutta was introduced from 1st April 1922, the railway having to meet a further 1 pie per ton out of their revenue than hitherto borne, i.e., a total of Re. 0-4-7 per ton. To meet the cost of additional facilities in the coalfields the colliery end terminal charge of Re. 0-2-0 per ton was enhanced to Re. 0-4-0 per ton from 1st May 1922. This explains the reasons for the variations in the rates for bunker coal to Kidderpore Docks in April 1922 and May 1922, respectively.

The present basis for charge for bunker coal despatched from the coalfields on this railway to Howrah and Calcutta is 0-165 pie per maund per mile plus the colliery end terminal charge of Re. 0-4-0 per ton and the receiving end terminal charge of Re. 0-4-6 per ton. The basis for charge for export

coal is the rate calculated at 0.165 pie per maund per mile on the distance for charge less 25 per cent. of same *plus* the colliery end terminal charge of Re. 0.4-0 per ton and the receiving end terminal charge of Re. 0.4-6 per ton.

53. **Running cost of coal train.**—The accounts do not permit of determining the “inclusive cost of running a train loaded with coal” and it is interesting to read what the Chief Commissioner of Railways had to say, as to the difficulty of assessing accurately the cost of carrying a ton of coal a mile, when addressing the Coal Conference of August 1923.

“Arguments have been used, based on the statistical cost of carrying one ton of coal a mile. I should like to say that there is no scientific method yet discovered for accurately assessing the cost of carrying a ton of coal a mile. It is true that by making certain assumptions we can arrive at a figure of the cost of carrying a ton of goods a mile but even this is inaccurate because there is no definite known scientific basis for the division of general charges between passenger traffic and goods traffic. No country in the world has been able to make this computation and it is one of the unsolved problems of railway economics.”

Bearing in mind what is stated above, the following statistical results are, however, offered for consideration. By applying the statistical unit of the average cost of hauling a goods unit (*viz.*, one ton) one mile, including interest on the capital expended, for the year ended 31st March 1924—*viz.*, 4.06 pies, it is found the cost of a coal train of 50 loaded 18 ton wagons from Asansol to Docks (143 miles) gives a result of:—

	Rs.	A.	P.
50 × 18 × 143 × 4.06 pies	2,721	8	0
Freight (including Terminals) charged on same train load of coal:—			

	Rs.	A.	P.
50 × 18 × Rs. 3-10-6 per ton	3,290	10	0

If, however, the coal carried was for export, the freight (including Terminals) earned would be:—

50 × 18 × Rs. 2-14-0 per ton—Rs. 2,587-8-0 or a loss of Rs. 131-0-0.

Another method may be taken of arriving at the average earning per ton mile in comparison with the average cost. During 1923-24, the total downwards coal hauled on account of the public, *i.e.*, excluding coal carried for railway purposes, was 4,370,908 tons and the average lead for downwards coal was 131 miles. The total public coal ton mileage was, therefore, 638,088,948. The total earnings for public coal downwards was Rs. 1,66,12,901 which gives an average earning per ton mile on account of public coal of 5 pies. It will, therefore, be observed that the margin between the average cost of hauling a goods unit 1 mile, *viz.*, 4.06 pies and the average earning per ton mile, *viz.*, 5 pies, is .94 pie. The margin available, therefore, per ton mile between the average cost and earning is very small and this may be taken to be an indication of probable profit which is less than 1 pie per ton mile or on a train load of 50 vehicles loaded with 18 tons each and carried for a distance of 143 miles from Asansol to Docks the net amount earned after deducting the working cost on the basis indicated above would be:—

50 × 18 × 143 × .94 pie = Rs. 630 profit per train for a distance of 143 miles or Rs. 4-6-0 per train mile.

If, however, the coal carried was for export the average net earning would be .60 + (4.40 × $\frac{1}{4}$) = 3.90 pies per ton per mile which means a loss of .16 pie per ton per mile or 50 × 18 × 143 × .16 = Rs. 107-4-0 per train or Re. 0-12-3 per train per mile.

* The rate of 4.40 pies represents freight charges less terminal charges.

54. **Possibility of reducing charges on coal.**—Read in conjunction with the reply to Question 53. The freight charges at present recovered on export coal booked to Kidderpore Docks less the rebate of 25 per cent. and the payment of Re. 0-9-1 per ton terminal to the Port Commissioners do not leave any margin for a further reduction in the charges or for an increase of the present rebate. The figures quoted clearly illustrate why no further reductions in rate or increase in the present rebate is permissible.

Appendix S is a statement showing from 1912 to 1924, the freight rates levied on public coal from Jherriah, Raneegunge and Asansol to Kidderpore Docks shewing separately:—

- (1) the conveyance charge,
- (2) the East Indian Railway despatching end Terminal, and
- (3) the Kidderpore Docks Terminal,

as well as the rebate allowed and the payment made by the East Indian Railway to the Port Commissioners, the resultant net rate year by year accruing to the East Indian Railway being also indicated.

It will thus be seen that the ultimate receipts earned by the East Indian Railway from Jherriah, Raneegunge and Asansol to Kidderpore Docks in 1924, compare as under with the ultimate receipts earned in 1912-13-14 and the percentage of increase is also shown:—

Ultimate receipts per ton to Kidderpore Docks.

Stations.	1912-13-14.	1924.	Percentage of increase.
	Rs. A. P.	Rs. A. P.	
Jherriah	2 4 9	2 15 5	29 per cent.
Raneegunge	1 8 9	2 1 2	34 „
Asansol	1 11 9	2 4 11	33 „

The percentage of working costs in 1912 and 1923-24 is shown below and the percentage increase is also shown in column (2):—

Year.	Percentage of total working expenses on total earnings. (1)	Percentage of increase. (2)
1912	37-63	...
1923-24	60-63	61 per cent.

Moreover, the average cost of hauling a goods unit, viz., one ton one mile including interest on Capital during the years 1912 to 1923-24 inclusive was

as under. It will be noted that the increase of the latter year over the former is 77 per cent.

	Pies.	Increase or decrease per cent. over each previous year's figure.	Increase or decrease per cent. of each year's figures over 1912.
1912	2.29	...	...
1913-14	2.46	+ 7%	+ 7%
1914-15*	2.34	— 5%	+ 2%
1915-16*	2.28	— 3%	— 4%
1916-17*	2.04	— 11%	— 11%
1917-18*	2.21	+ 8%	— 3%
1918-19*	2.25	+ 2%	— 2%
1919-20	2.67	+ 19%	+ 17%
1920-21	3.10	+ 16%	+ 35%
1921-22	4.11	+ 33%	+ 79%
1922-23	4.25	+ 3%	+ 86%
1923-24	4.06	— 4%	+ 77%

* No appreciable renewals of Rolling Stock from 1914-15 to 1918-19 inclusive.

It will be observed that the payment made for the Dock Terminals, *i.e.*, other than East Indian Railway, has risen from Re. 0-2-3 per ton in 1912-13-14 to Re. 0-9-1 per ton in 1924 representing an increase of 304 per cent.

On the other hand, it is interesting to note that the rebate payable in 1912-13-14 and 1924, compares as under, representing an increased percentage of payment of rebate as shown in column (3).

Stations,	Rate of rebate per ton.		Percentage of increase. (3)
	(1) 1912-13-14.	(2) 1924.	
	Rs. A. P.	Rs. A. P.	
Jherrian	0 11 0	1 0 0	45 per cent.
Raneegunge	0 9 0	0 11 3	25 „
Asansol	0 9 0	0 12 6	39 „

With these facts, it is not considered that any reduction in East Indian Railway rates or any further increase in rebate is possible for the reasons set forth above.

55. Flat rates from all parts of coal fields.—Presumably the suggestion is that the flat rate should be calculated on the basis of the mean of the distances between the Jherriah and Raneegunge fields and Calcutta. Such a point is in the neighbourhood of Barakar about 30 miles west of Ondal.

It is not clear what advantages are claimed for the suggestion, which if adopted would mean that collieries situated in the Ondal and Raneegunge fields would have to pay freight in the downward direction on a longer distance than they do now and would thereby be deprived of the advantages of their geographical position.

56. Seasonal rates.—From an examination of the figures of coal carried during recent years the inference is that there is really no slack season on the East Indian Railway. It is admitted that during the third quarter of the year, the East Indian Railway could, generally speaking, despatch and handle more coal traffic if it offered, because during this period merchandise traffic falls off. It is very doubtful whether the controlling factor as regards the despatch of coal during the monsoon is the drop in demand, for it is much more probable that when there is a drop in despatches during this season, this is due to the fact that collieries are not in a position to despatch any more coal. Raisings during the monsoon months are invariably down and unless collieries have heavy stocks of coal on hand at the beginning of the monsoon, despatches must inevitably suffer. The cause of the reduced raisings during the monsoon is probably, therefore, not so much an absence of demand for coal, as the reduced supply of coal raising labour that is available owing to its movement away to other districts for purposes of cultivation and also to the fact that frequently during this period a good number of the smaller collieries are drowned out. Moreover, apart from the question of raisings, collieries during the monsoon months are frequently in difficulties as regards their ability to load wagons, as not only are they short during this period of above-ground labour, but also during heavy rain they have difficulty in getting such labour to work.

Assuming, however, the limiting factor as regards the despatch of coal during the monsoon months is really a falling off in demand, it is doubted if a seasonal rate would do much to increase the demand, as certain trades, such as brick burning, shut down and there is a general slackening in the activities of the Indian Industrial World and these causes would not, it is thought, react to any reduction in rates. Summing up the position the only possible conclusion is that the introduction of a seasonal rate for coal would practically have no effect on improving despatches and would, therefore, involve the railway in a very large reduction in revenue with no corresponding benefits to the public generally, and the railway is, therefore, unable to recommend such a reduction.

In this connection, it is interesting to read the following extract from a letter written on 24th July 1924, by the Railway Board to the Coal Transportation Officer, Calcutta:—

“An examination of the figures for some years past shows that there is no material falling off in coal despatches during the third quarter of the year, and that, after existing demands have been met there is only a small margin of transport capacity available for a possible increase. The adoption of the proposal would, therefore, mean a heavy loss to Railway revenue with little or no resultant benefit as regards increased despatches and in the circumstances, the Railway Board regret they cannot lend their support to it.”

57. **Rates and terminals for loco. coal.**—The following are the existing scales of rates applicable to (1) Coal for the public and (2) Coal for the use of Foreign Railways:—

(1) For *Public Coal* in full wagon loads O. R. L.

(i) For traffic carried for distances 400 miles and under:—

	Per maund per mile..
	Pie.
For the first 200 miles	0-165
Plus for 201 miles and up to 400 miles inclusive	0-13

(ii) For traffic carried for distances over 400 miles:—

For the first 200 miles	0-15
Plus for 201 miles and up to 300 miles inclusive	0-13
Plus for 301 miles and up to 700 miles inclusive	0-07
Plus for 701 miles and upwards	0-06

Subject to the differential rule.

(2) For Coal for the use of *Foreign Railways* in full wagon loads O. R. L.:—

	Per maund per mile.
	Pie.
For the first 200 miles	0-15
Plus for 201 miles and up to 500 miles inclusive	0-07
Plus for 501 miles and upwards	0-06

The terminals and other extra charges leviable on Public Coal over the East Indian Railway are also levied on Coal for the use of Foreign Railways. The calculated rates from Jherriah to Calcutta compare as under:—

	Rs. A. P.
	Per ton.
For Public Coal	4 8 6
For Coal for the use of Foreign Railways	4 3 6

For the purposes of earning the rebate on Foreign Railway Locomotive Coal booked to Calcutta and exported from there to destination, consignments must be booked in the first instance as Public Coal and freight paid accordingly.

The above figures illustrate that the present basis of charge for Foreign Railway Coal is lower than that for Public Coal. Prior to 1st April 1920, the same scale of rates applied to both Public and Foreign Railway Locomotive Coal. In 1920 when an enhancement in the rates for Public Coal was effected, the scale of charge for Foreign Railway Coal was not simultaneously enhanced, on the ground that the application of the higher rate on this traffic would mean an increase in the working cost of Railways receiving this coal. Since 1st April 1920, therefore, different rates for Coal (1) for the Public and (2) for Foreign Railway use, have been maintained, and although Public Coal rates were further enhanced on 1st April 1921, and again on 1st April 1922, (for short distance traffic only) the rates for Coal for Foreign Railway use were allowed to remain undisturbed. In December 1922, endeavours were made to bring the rates for Foreign Railway Coal to the same level as for Public Coal but the Railway Board having definitely declined to agree to such an enhancement the rates for Foreign Railway Coal were enhanced only up to the basis of charge quoted above.

58. **Payment of terminal charges, recovered from public, to Port Commissioners.**—The whole of the terminal charge (Re. 0-4-6 per ton) collected

from the public on coal booked to Kidderpore Docks is paid to the Port Commissioners and in addition, the East Indian Railway pay from their own revenue a further amount of Re. 0-4-7 per ton to the Port Commissioners making a total payment of Re. 0-9-1 per ton.

59. Payment of extra terminal charges to Port Commissioners.—The East Indian Railway recovers Re. 0-4-6 per ton from the public but pays Re. 0-9-1 per ton to the Port Commissioners, the balance Re. 0-4-7 is made good out of the East Indian Railway revenues.

(xxiii) The rebate on coal and its effects.

60. Effect of export-coal rebate.—The present rule of allowing a rebate of 25 per cent. of the actual freight rate on export coal came into force on and from 1st January 1924. A comparative statement showing figures of coal exported from Calcutta to Indian and Foreign Ports year by year from 1912 up to September 1924 (*i.e.*, up to the end of the Official half-year) is at Appendix T. It will be noted that the figure for 1924-25 approximates that for 1921-22 but gives every promise of being better than the last two preceding years. A statement showing the sea freight on Coal from Calcutta to Bombay is at Appendix U and it will be observed that shortly after the introduction of the rebate for export coal, the shipping freight was enhanced by Re. 1 per ton in week-ending 29th February 1924, and remained at this level up to week-ending 18th April 1924, and it is not unlikely that this increase in steamer freight prejudiced the export trade as the rebate granted by the Railway Companies to stimulate the export coal traffic was in the case of coal from Asansol and Raneegeunge more than absorbed by the enhancement in steamer freights. The result of the 25 per cent. rebate granted on export coal traffic has already been dealt with in the answer to Question 52.

61. Payment of rebates.—The coal companies apply for rebate on exported coal submitting the following documents in support of their claims:—

- (a) Rebate Statements in the prescribed Form (Appendix V).
- (b) Bills of Lading in support of the quantities of coal exported by sea.
- (c) A Summary Sheet.
- (d) A Bill in duplicate shewing the amount of Rebate due.

The rates shewn in the Rebate Statements are checked and the items are verified with those shewn in the East Indian Railway Coal Freight Bills and the quantities shown per Bills of Lading are checked with the figures shewn in the Summary Sheet and the aggregate weights shewn in the Rebate Statements.

If the quantities of coal shipped are in excess of the aggregate weight on which rebate is claimed, the Bengal Nagpur Railway are asked to certify on what tonnage rebate has been claimed against that line with a view to reconcile the figures.

After completing the check and making necessary alterations in the Bills and Statements, the Bill is passed and certified for the correct amount and sent to the Treasurer for payment.

The average time taken in granting rebates cannot be ascertained, as at present rebate statements are submitted monthly and payment is made quarterly on receipt of the Bills and connected statements for each complete quarter. It may, however, be said that rebate statements for a complete quarter of each respective Firm are checked and rebate granted approximately within 3 weeks.

62. Rebate versus concessional rate.—The grant of a concessional rate of Railway freight on Export Coal has several disadvantages. Firstly, there would be no satisfactory and safe means of checking and discriminating between coal for export and coal for other purposes, as the declaration of the despatching colliery would be the only determining factor. Secondly, coal

for other Calcutta destinations, etc., might be diverted to the place of export in order to obtain the benefit of the low concession rate incurring congestion and unnecessary unremunerative haulage. At present no rebate is paid by the Chief Auditor unless duly certificated by Shippers. With a concessional rate the railway could not safeguard itself completely against fraud. The rules attached to the grant of rebate possess safeguards against these frauds and misdeclarations.

63. Rebates or special rates on other commodities.—So far as the East Indian Railway is concerned as regards quoting special rates, there are no special rates for export traffic for commodities other than coal, but to foster the Indian iron industry certain rebates have been allowed in respect of their finished products and bye-products of the coking ovens sent to Calcutta for shipment, *vide* Sections 6 and 7 of Chapter XIII, pages 367 and 368 of East Indian Railway Goods Pamphlet No. 1 reproduced below :—

“ 6. Rebate on the carriage of raw materials and finished products and bye-products of the Coking Ovens to and from the Bengal Iron Company's Works at Kulti.—Subject to a minimum of 20 million ton-miles per calendar year of all traffic over the East Indian Railway to and from Bengal Iron Company's works at Kulti, a rebate will be allowed on the carriage of raw materials from any station on the East Indian Railway to the Steel Works at Kulti for the manufacture of Iron and Steel of all kinds at the Works, and for the carriage of their finished products and bye-products of the coking ovens sent from Kulti to Calcutta for shipment. The rebate will be arrived at by calculating the difference between the tariff rates and $\frac{1}{2}$ th pie per maund per mile and will be granted on a proportionate scale thus: if the ton-mileage is 20 millions, the rebate granted will be two-thirds of the difference, if the ton-mileage is 25 millions the rebate will be $\frac{5}{6}$ ths of the difference, if the ton-mileage is 30 millions or over the difference will be paid in full.

“ 7. Rebate on freight for the conveyance of raw materials of all kinds for the manufacture of Iron and Steel and all finished products and bye-products of the Coking Ovens to and from Indian Iron and Steel Company's Works near Asansol.—Subject to a minimum of 20 million ton-miles per calendar year of all traffic over the East Indian Railway to and from the Indian Iron and Steel Company's Works near Asansol, a rebate will be allowed on the carriage of raw materials from any station on the East Indian Railway to the Steel Works near Asansol for the manufacture of Iron and Steel of all kinds at the works, and for the carriage of the finished products and bye-products of the coking ovens sent from the Steel Works to Calcutta for shipment. The rebate will be arrived at by calculating the difference between the tariff rates and $\frac{1}{2}$ th pie per maund per mile and will be granted on a proportionate scale thus: if the ton-mileage is 20 millions, the rebate granted will be $\frac{2}{3}$ ths of the difference, if the ton-mileage is 25 millions the rebate will be $\frac{5}{6}$ ths of the difference, if the ton mileage is 30 millions or over the difference will be paid in full.”

(xxiv) *The working of the coal depôts at Howrah and Shalimar.*

64. Position as to coal depôts.—The land leased out as coal depôts at Howrah is the property of the East Indian Railway. At Shalimar, however, the land is owned by the Port Commissioners and is leased out by them. Rents at Howrah are fixed by the East Indian Railway while at Shalimar this is a matter entirely controlled by the Port Commissioners. The Shalimar yard is worked by the East Indian Railway who are paid for this service by the Port Commissioners.

65. **Coal-depôt rents.**—Previous to 1st October 1922, the coal yard at Howrah was divided into 3 zones and rents were levied on the following scale:—

Depôts within 300 ft. of the river bank	Rs. 20 per 1,000 sq. ft. per annum.
Depôts beyond 300 ft. but within 600 ft.	Rs. 10 „ „ „
Depôts beyond 600 ft.	Rs. 5 „ „ „

On and from 1st October 1922, however, the coal yard was divided into two zones and depôts of a standard area of 2,500 sq. ft. each were demarcated. Rents charged were:—

Depôts in zone 'A' (up to 360 ft. approx. from river)	Rs. 250 per 1,000 sq. ft. per annum.
Depôts in zone 'B' (beyond 360 ft. approx. from river)	Rs. 150 „ „ „

These rents are still in force.

The reasons for the enhancement were:—

- (1) the excessive charges which the railway had to bear in connection with these depôts,
- (2) the necessity in the interests of the coal trade generally for shutting out small firms which gave the railway very little traffic, and
- (3) the advisability of coming into line with the higher rents obtained by the Port Commissioners at Shalimar.

(1) Previous to 1st October 1922, the average total sum realised as rent for coal depôts was approximately Rs. 4,500 per annum. This was but a small fraction of the expenditure in maintaining and serving the depôts. One item alone, the average sum (Rs. 6,000) paid to the Port Commissioners for dredging at the river front exceeded this figure.

Our working expenses, i.e., locomotive, and wages of locomotive, traffic and engineering staff may be estimated at Rs. 60,000 per annum.

The total sum now realised as rent approximates Rs. 56,000 per annum. Even this works out to a very low percentage when the services rendered and the value of the land let are considered.

(2) It was never the intention when the coal yard was built that the railway would make a profit by the letting of depôts but that the importation of large quantities of coal might be made simple and the railway thus earn freight. Certain firms, however, to whom depôts had been let, did very little business, and as the rent was low, they held on giving just a minimum of traffic and using the depôts as stacking grounds for their coal. It was to exclude such firms and to make the conversion of depôts into stacking grounds an expensive procedure that rents were raised.

(3) The charges levied by the Port Commissioners at Shalimar are:—

First 200 ft. from river bank	Rs. 250 per 1,000 sq. ft. per annum.
Next 100 ft. from river bank	Rs. 166 per 1,000 sq. ft. per annum.
Beyond 300 ft. from river bank	Rs. 116 per 1,000 sq. ft. per annum.

The facilities given at Howrah are similar to those given at Shalimar by the Port Commissioners and the charges we levied were absurdly low in comparison. The shoots provided at Howrah are of very great convenience in unloading from wagon to boat direct.

(xxv) *Prevention of pilferage.*

66. Pilferage from wagons.—Pilferage principally occurs while wagons are standing in yards or at way-side stations.

In the case of large yards, high walls and, in certain places, suitable fencing are the best safeguards, while at smaller stations the appointment of Watch and Ward staff would prove adequate.

Measures are being taken in both these directions and District Officers have been vested with powers to grant rewards up to Rs. 10 per head for the detection of thefts.

The enactment of the pilfering legislation, which is now under consideration, will be of great assistance.

(xxvi) *General recommendations.*

67. Suggestions for quickening coal transport and stimulating export of coal.—Export coal would be considerably expedited in transit if booked in rakes of fifty to sixty wagons only. It is the small lots that cause averages to run up, waiting for train room.

The construction of the Bally Bridge would tend to speed up transit as the Bandel Naihati section would be relieved to great extent by the fact that the traffic to and from the Docks would avoid this section.

The fitting of vacuum brakes or pipes on the wagons of all broad gauge railways will go far towards reducing the time taken in the forming and despatch of trains. The East Indian Railway expects to have all its goods stock braked or piped by the end of 1925 and at the I. R. A. Conference held at Simla in October 1924 it was agreed that from 1st August 1925 a penalty should be imposed on an owning railway offering in interchange a wagon unfitted with vacuum brake or pipe.

The railway has no special recommendations to make in regard to stimulating the export trade; it is always prepared to consider sympathetically any suggestions.

(xxvii) *Coke.*

68. Coke.—The answers apply in their entirety to coke as well, so far as transport is concerned. In the matter of charges there are differences.

(xxviii) *Coal traffic via Naihati.*

69. Transit of goods trains from Naihati to Docks.—There are no special difficulties which militate against the quick transit of goods trains between Naihati and Docks and *vice versa*. These trains run very freely over the Up and Down quadruple lines on that section. The difficulties experienced are actually at Naihati signals waiting to cross the Eastern Bengal Railway Main Lines on to the Down quadruple line.

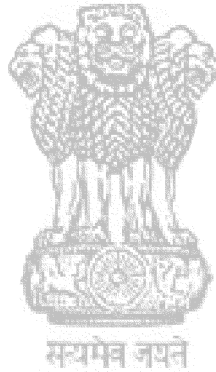
70. Turn round of stock between Naihati and Bandel.—The difficulties experienced at present in connection with the prompt turning round of stock and engines between Bandel and Naihati are due to:—

- (a) Every load having to be banked to Hooghly Ghat.
- (b) Single line working over the Jubilee Bridge.
- (c) The busily engaged section between Naihati and Bandel, which has to cope with 11 Up and 11 Down Passenger trains in the 24 hours.
- (d) Branch trains having to wait at Naihati signals to give precedence to Eastern Bengal Railway main line trains.

All trains of over 45 wagons have to be provided with a Bank pilot between Bandel and Hooghly Ghat.

The main difficulty, viz., of crossing the Eastern Bengal Railway Up and Down Main lines would be avoided if a flying junction was provided at Naihati.

If the scheme put forward by the East Indian Railway for a new bridge over the Hooghly at Bally is carried out, the large resultant drop in the volume of traffic passing between Bandel and Naihati would to a large extent render these difficulties unimportant.



APPENDIX B.

(Vide reply to question 8.)

Supply Register or Ledger.
EAST INDIAN RAILWAY.

C. 125.

Colliery
Siding

Letter of Authority.	Concern.	Destination.	Class of coal and purpose.	Class of special.	Authorized Supplies.	Date of entry.	Number of wagons supplied and date of supply.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							

APPENDIX C.

C. 45A.

(Vide reply to question 8.)

E. I. RAILWAY.—DHANBAD DISTRICT—COAL WAGON INDENT.

To THE DISTRICT SUPERINTENDENT, DHANBAD.

Please supply wagons as noted below for loading at _____ siding
on _____ day the _____ day of _____ 192 _____

For Upwards destination.	No. of wagons required.	Route via which to be booked.	Particulars of Authorisations in full.	For Downwards destination.	No. of wagons required.	Route via which to be booked.	Particulars of Authorisations in full.
E. I. R. Loco . . .				E. I. R. Loco . . .			
„ Public above				„ Public below			
Coal-fields including Loop				Coal-fields			
Line between				Loop line			
Kiul and up to Nathnagar				Bhagalpur and below.			
(inclusive.)				B. & N.-W. R. via			
B. B. & C. I. R. Loco.				R. P. Loco.			
Broad Gauge.				B. & N.-W. R. via			
B. B. & C. I. R. Public				R. P. Public.			
Broad Gauge.				E. B. R. Loco.			
B. B. & C. I. R. Loco.				„ Public			
Metro Gauge.				A. B. R. Loco.			
B. B. & C. I. R. Public				„ Public			
Metro Gauge.				B. D. R. Loco.			
G. I. P. R. Loco.				„ Public			
„ Public				B. N. R. Loco.			
M. & S. M. R. Loco.				„ Public			
„ Public				B. D. R. R. Loco.			
N.-W. R. Loco.				„ Public			
„ Public				M. & S. M. R. Loco.			
O. & R. R. Loco.				„ Public			
„ Public.				S. I. R. Loco			
B. & N.-W. R. via				„ Public			
MKG. Loco.				Howrah			
B. & N.-W. R. via				Shalimar			
MKG. Public.				Docks			
B.-N. R. via JBP. Loco				Garden Reach			
„ Public				Sealdah			
J.-B. R. Loco.				Chitpore			
„ Public				Cossipore Road			
N. G. S. & Loco.				Ultadanga			
„ Public				Chetla			
G. R. Loco.				P. T. Ry.			
„ Public				Light Rys. Loco.			
G. P. S. R. Loco.				„ Public			
„ Public							
B. S. R. Loco.							
„ Public							
Light Rys. Loco.							
„ Public							
UPWARDS TOTAL				DOWNWARDS TOTAL			
						GRAND TOTAL	

All indents must be prepared in English and ink and must be delivered to the Station Master or District Superintendent by 8 p. m. two days before the date on which wagons are required to be supplied in case of E. I. R. supplies and three days in case of indents for the B. N. Railway and via.

E. I. R. Covered wagons should be loaded Upwards.

Route Column must invariably be filled in. Failure to do so will possibly result in no allotment, should any doubt arise.

Indents must be stamped only in the space provided.

Date—192

Space for Colliery stamp.

Manager,

(*Vide* reply to questions 8 and 25.)
EAST INDIAN RAILWAY.

C-81.

PILOT GUARD'S SUPPLY MEMO.

192

Starting

五

Pilot

Time _____ H. _____ M. _____

[illegible]

Columns 1 & 2 to be filled in by the office. Columns 3, 4, & 5 to be filled in by the Pilot Guard in Ink. Loaded wagons supplied to collieries to be also entered.

E. I. R. covered wagons are to be supplied against upwards indents to the fullest extent possible.

When E. I. R. wagons are supplied for loading Foreign Ry. coal (except to E. R. Ry.) covered wagons are always to have preference.

Signature of Pilot Guard.

(Vide reply to questions 8 and 25.)

EAST INDIAN RAILWAY .

WAGON CHALLAN.

To

THE COLLIERY MANAGER,

COAL CO.,

Dhanbad, _____, 192

Siding.

DEAR SIR,

With reference to your indent, dated the _____ 192 , the wagons allotted to your Colliery are shown below.

Wagons supplied for special purposes must be loaded only for those purposes and those allotted for Downwards must not be loaded for Upwards and *vice versa*.

Please load covered wagons upwards.

Yours faithfully,

District Superintendent.

Purpose for which allotted.	No. of wagons allotted for			REMARKS.	No. and type of wagon supplied.
	Loco.	Spls.	Pub.		
E. I. Ry.					
N. W. Ry.					
G. I. P. Ry.					
B., B. & C. I. Ry.					
O. & R. Ry.					
B. & N. W. Ry.					
B. N. Ry.					
M. & S. M. Ry.					
S. I. Ry.					
E. B. Ry.					
J. B. Ry.					
Light Rys.					
Number of loaded wagons supplied.					

Time supplied _____ Date supplied _____ 192 .

Signature of Pilot Guard.

No. _____ dated _____ 192

Forwarded to the District Superintendent for check and record—
 wagons have been correctly placed in the siding as shown above.

Rev. 4-10-23.

Please return this challan intact for check.

Colliery Manager,

—Colliery.

APPENDIX I.

(Vide reply to question 25.)

Samples of Wagon Card Labels in use on the East Indian Railway for the carriage of Coal Traffic only.

<p style="text-align: right;">C. 37A.</p> <p>COAL Weighbridge Stamp _____</p> <p>Steamer _____ Colliery stamp. _____</p> <p>Wagon No. _____ Date _____</p> <p>DOCKS _____</p> <p>Consignee _____</p> <p>Particulars in the event of transhipment. Wagon _____ Transhipped into _____ at _____ Date _____ (Printed Black on Yellow).</p>	<p style="text-align: right;">C. 37C.</p> <p>COAL Weighbridge Stamp _____</p> <p>Wagon No. _____ Date _____ Colliery stamp. _____</p> <p>To _____</p> <p>(RUNNING POWER) E. B. R.</p> <p>Consignee _____</p> <p>Particulars in the event of transhipment. Wagon _____ Transhipped into _____ at _____ Date _____ (Printed Red on White).</p>
<p style="text-align: right;">C. 37B.</p> <p>COAL Weighbridge Stamp _____</p> <p>Wagon No. _____ Date _____ Colliery stamp. _____</p> <p>HOWRAH _____</p> <p>Consignee _____</p> <p>Particulars in the event of transhipment. Wagon _____ Transhipped into _____ at _____ Date _____ (Printed Black on Pink).</p>	<p style="text-align: right;">C. 37D.</p> <p>DOWN COUNTRY.</p> <p>COAL Weighbridge Stamp _____</p> <p>Wagon No. _____ Date _____ Colliery stamp. _____</p> <p>To _____</p> <p>Via _____</p> <p>Consignee _____</p> <p>Particulars in the event of transhipment. Wagon _____ Transhipped into _____ at _____ Date _____ (Printed Red on White).</p>
<p style="text-align: right;">C. 37E.</p> <p>UP COUNTRY.</p> <p>COAL Weighbridge Stamp _____</p> <p>Wagon No. _____ Date _____ Colliery stamp. _____</p> <p>To _____</p> <p>Via _____</p> <p>Consignee _____</p> <p>Particulars in the event of transhipment. Wagon _____ Transhipped into _____ at _____ Date _____ (Printed Blue on White).</p>	<p style="text-align: right;">C. 37F.</p> <p>This label is similar to C. 37E. but it is crossed diagonally by the initials S P R in Red.</p>

(Vide reply to question 25.)

EAST INDIAN RAILWAY.

Pilot Guard's Clearance Memo. Ex

1	2	3	4	5	6	7
Date and Time worked.	Total Nos. of wagons cleared.	Individual Nos. of wagons cleared.	Name of Coal Company.	Siding.	Individual Nos. of wagons left behind.	Reasons for being left behind.
Date.	E. I. Ry.	Covered.			E. I. Ry.	
		Opens and Hoppers.			Foreign.	

REMARKS.

Signature of Pilot Guard.

(Vide reply to question 25.)

EAST INDIAN RAILWAY.

U. 33.

Statement showing particulars of wagons weighed at _____ weigh-bridge on _____ and of declaration notes booked under, also time taken in turning round wagons.

[illegible]

NOTE.—Columns 1 to 8 to be filled up at the Weigh bridge and columns 9, 10 and 11 to be filled up by the Trains Office.

C. 77.

APPENDIX L.

(Vide reply to question 25.)

E. I. R. PILOT GUARDS' REGISTER

1	2	3	4	5	6	7	8
Colliery siding.	Time of supply.	Whether loaded or empty.	Individual numbers of wagons supplied.	Individual numbers of demilled or damaged wagons stabled in section.	Individual numbers of loaded wagons stabled in section.	Individual numbers of empty wagons stabled.	Date stabled.

Pilot Guards must enter the condition of their various sections daily in this Register, i. e., stabled wagons must be shown daily until cleared.

N B.—The following letters should be placed before the individual numbers of wagons to denote the owning railway : —

H for E. I. Ry.

N for N.-W. Ry.

E for E. B. Ry.

N G S for N. G. S. Ry.

C for B., B. & C. I. Ry.

B for B.-N. Ry.

G for G. I. P. Ry.

M for M. S. M. Ry.

S for S. I. Ry.

APPENDIX M.

(Vide reply to question 26.)

M. M. 66.

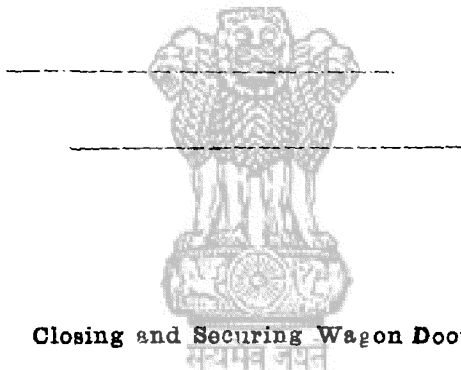
EAST INDIAN RAILWAY.

COAL MANAGER'S OFFICE,

Calcutta, 27th August 1924.

To

THE COLLIERY MANAGER,



DEAR SIR,

Closing and Securing Wagon Doors.

Notwithstanding the fact that the importance of closing and securing wagon doors with cotters, has been brought repeatedly to the notice of Colliery Managers, instances still continue, on a very large scale, of wagon doors being left open and uncottered after loading.

It is needless to point out that much loss of coal occurs owing to the indifference of Colliery loading staff to this matter, nor need I enlarge on the danger to which the railway staff and passengers are exposed by a loose swinging wagon door. Moreover, delays in transit are occasionally traceable to insecurely fastened doors—for instance, wagons cut off at roadside stations where labour is not plentiful, and where contents of wagons have partly to be unloaded before doors can be made to shut properly and the coal then reloaded.

These considerations and that of the possibility of damage to wagon stock, do not, however, appear to have been fully appreciated by Colliery Managers and those responsible for the closing of wagon doors.

The railway staff have strict orders to close and cotter every wagon which is not so secured, but, nevertheless, instances do pass undetected.

I appeal, therefore, for your co-operation in this direction and am sure that, as always, you will gladly give it.

Yours faithfully,

A. BURBIDGE,

Coal Manager.

APPENDIX N.

(Vide reply to question 29.)

List of Collieries fitted with mechanical loading plant.

Name of Colliery Company.	Name of siding fitted with mechanical loading plant.	Capacity of siding. Wagons.	Capacity of plant in tons per hour.	Capacity of plant in wagons per day of 24 hours.	Pilot served by and whether on 10 hours or 20 hours system.
DHANBAD DISTRICT.					
Barakar Coal Company	Nowaghar No. II	80	45	60	South Line 10 hours.
Ditto	Loyabad No. I	91	45	60	Bansjora 10 "
Khas Jherria	Kuas Jherria No. I	30	60	80	Gopalchuck 10 "
Raneegunge Coal Association	Kustore	88	100	134	Bhuggutdh 10 "
ASANSOL DISTRICT.					
Bird and Company	Jobs	50	30	40	Dn. Asansol 10 "
Iodna Coal Company	Sripur	100	60	80	Toposi 10 "
Equitable Coal Company	Jamuria 1 and 2	100	60	80	Jamuria 10 "
Ditto	Rasundanga	84	60	80	Toposi 10 "
Harriladib	Akhalpur	81	60	80	" 10 "
Mondalpur	Mondalpur	67	60	80	" 10 "
West Jamuria	Basidpur	72	60	80	" 10 "
Singaran Coal Syndicate	Singaran No. 8	15	10	13	" 10 "
Burn and Company	Sunkerpur	40	60	80	Ukhara 10 "
Bird and Company	Baukola No. 1	100	30	40	" 10 "
Dhemo Main	Dhemo	75	20	27	Sodepur 20 "

APPENDIX O.

(*Vide* reply to question 34.)

C. 42.

No. _____

EAST INDIAN RAILWAY.

DISTRICT SUPERINTENDENT'S OFFICE,

_____ 192 .

FROM

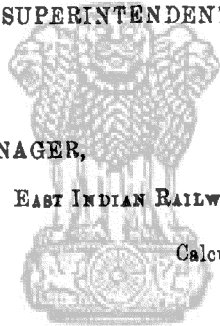
THE DISTRICT SUPERINTENDENT,

To

THE COAL MANAGER,

EAST INDIAN RAILWAY,

Calcutta.



DEAR SIR,

Report on Messrs. _____

request for _____

off the _____ Branch.

(1) Area of coal land to be served.

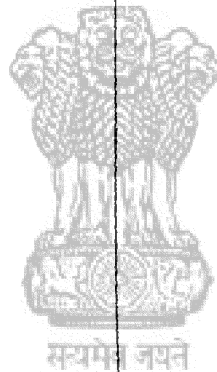
(a) From whom leased

APPENDIX O.—(Continued)

- (b) Date of registered deeds and the number of years leased for.
- (c) In what mouza situated.
- (d) Property under the management of :—
 - (i) Manager's name.
 - (ii) Description of Mining Certificate.
- (2) Quality and seam of coal to be worked.
- (3) Means of working the coal from this property, i.e., Pits, Inclines, Quarries
- (4) What plant is to be installed and utilised for raising the coal to the surface.
- (5) Probable output in tons per mensem at present.
 - a) Probable output in tons per mensem when the colliery is fully equipped and developed.
- (6) Date from which coal is expected to be raised, and if raised, from when, and the actual stock on hand on date of inspection.
 - (a) If raising already commenced, give date, and quantity of stock on hand.
- (7) Distance of colliery from nearest siding.
- (8) Names of Proprietors and their financial status.
 - (a) Have title deeds been produced and are they in order?
- (9) How is coal to be brought to siding, i.e., by cars, tram, etc.
- (10) Transport charges up to siding.
- (11) Actual mileage up to take off of the proposed siding.

APPENDIX O.—(Continued.)

- (12) What will the Upwards and Downwards coal rates work out to on coal despatched from the proposed siding.
- (13) Are these Collieries already served, if so, by what siding and to what extent.
- (14) What siding accommodation is necessary in your opinion as against what is asked for



District Superintendent.

Give on page 7 a rough sketch showing the proposed siding in relation to the main line or Branch off which it is to be constructed.

On page 8 give any general or special remarks you have to offer.

APPENDIX O.—(Concluded.)

SKETCH.

GENERAL REMARKS.



APPENDIX P.

Vide reply to question 50.

Rules for Public coal from Bombay to the undermentioned stations on the Bombay, Baroda and Central India Railway.

Stations to	RATE PER TON.					
	From 1912 to 31st October 1917.	From 1st November 1917 to 31st July 1918.	From 1st August 1918 to 16th December 1920.	From 17th December 1920 to 15th December 1921.	From 16th December 1921 to 30th June 1924.	From 1st July 1924 to date.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Broach	3 1 11	5 6 6	4 15 6	6 3 6	6 3 6	6 3 6
Baroda	3 13 3	6 6 6	5 15 6	7 3 6	7 3 6	7 3 6
Ahmedabad	4 10 10	7 10 6	7 3 6	8 8 6	7 8 0	7 12 6
Virangam	4 15 5	8 8 6	8 1 6	9 5 6	9 5 6	9 5 6
Indore	5 10 9	11 1 0	10 10 0	11 15 0	11 15 0	11 15 0
Via Anand	4 1 9	6 12 6	6 6 6	7 10 6	7 10 6	7 10 6
Via Anand to Petlad	5 4 0*	5 4 0*	10 0 0*	10 0 0*	10 0 0*	10 0 0*

* Per 4-wheeled wagon.

APPENDIX Q.

Vide Reply to question 50.

Rates per ton for Coal, O. R., L. from Karachi to the undermentioned stations on the North Western Railway.

Stations to	RATE PER TON.					From 1st August 1922.
	1912 to 31st March 1920.	1st April 1920 to 31st March 1921.	1st April 1921 to 30th September 1921.	1st October 1921, to 31st July 1922.	Rs. A. P.	Rs. A. P.
Sukkur.	Rs. A. P. 4 6 0	Rs. A. P. 4 11 0	Rs. A. P. 5 2 0	Rs. A. P. 6 4 0	Rs. A. P. 6 10 0	Rs. A. P. 6 10 0
Quetta	6 6 0	6 13 0	8 8 0	8 10 0	8 10 0	8 10 0
Multan City.	6 11 0	7 1 0	8 13 0	8 15 0	8 15 0	8 15 0
Lyalpur	7 8 0	8 1 0	9 15 0	10 1 0	10 1 0	10 1 0
Sargodha	7 13 0	8 6 0	10 3 0	10 5 0	10 5 0	10 5 0
Bhatinda	7 13 0	8 6 0	10 3 0	10 5 0	10 5 0	10 5 0
Ferozepore Cantonment	7 13 0	8 6 0	10 6 0	10 8 0	10 8 0	10 8 0
Lahore	7 15 0	8 8 0	10 8 0	10 10 0	10 10 0	10 10 0
Amritsar	8 4 0	8 13 0	10 12 0	10 14 0	10 14 0	10 14 0
Ludhiana	8 6 0	8 15 0	10 15 0	11 1 0	11 1 0	11 1 0
Rohtak	8 13 0	9 6 0	11 8 0	11 10 0	11 10 0	11 10 0
Rawalpindi	8 15 0	9 8 0	11 12 0	11 14 0	11 14 0	11 14 0
Saharanpur	8 15 0	9 8 0	11 12 0	11 14 0	11 14 0	11 14 0
Peshawar Cantonment	9 3 0	9 13 0	12 1 0	12 3 0	12 3 0	12 3 0
Meerut City	9 6 0	9 15 0	12 3 0	12 5 0	12 5 0	12 5 0

APPENDIX R.

Vide reply to question 50.

Rates for Public coal from Madras to principal internal stations on the Madras and Southern Mahratta Railway.

Stations to		RATE PER MAUND.					
		From 1st January 1912 to 30th November 1917.	From 1st December 1917 to 31st March 1920.	From 1st April 1920 to 31st March 1921.	From 1st April 1921 to 30th November 1921.	From 1st December 1921 to 30th September 1922.	From 1st October 1922.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Nandyal	.	0 4 7	0 4 9	0 5 0	0 5 5	0 5 9	0 6 5
Bellary	.	0 4 1	0 4 3	0 4 5	0 4 9	0 5 1	0 5 9
Guntakal	.	0 3 9	0 3 11	0 4 1	0 4 5	0 4 9	0 5 4
Tadipatri	.	0 3 3	0 3 5	0 3 7	0 3 10	0 4 2	0 4 8
Bangalore	.	0 3 2	0 3 4	0 3 5	0 3 9	0 4 1	0 4 6
Ranipet	.	0 1 6	0 1 8	0 1 8	0 1 9	0 2 1	0 2 3

APPENDIX S.

Vide reply to question 54.

Statement of rates per ton for public coal to Kidderpore Docks.

		1912, 1913 and 1914.			1915 and 1916.			1917, 1918 and 1919.		
		From Jherriah.	From Anusol.	From Ranegunge.	From Jherriah.	From Anusol.	From Ranegunge.	From Jherriah.	From Anusol.	From Ranegunge.
Distance for calculation of rebate.		170	132	121	170	132	121	170	132	121
		Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.
Payable by Public.	Railway despatching and terminal	...	...	...	...	...	...	0 2 0 0 2 0 0 2 0		
	Dock terminal	...	...	...	...	...	...	...	...	...
	Freight	3 2 0	2 7 0	2 4 0	3 2 0	2 7 0	2 4 0	3 2 0	2 7 0	2 4 0
Total		3 2 0	2 7 0	2 4 0	3 2 0	2 7 0	2 4 0	3 4 0	2 9 0	2 6 0
Subtract	Rebate	0 11 0	0 9 0	0 9 0	0 11 0	0 9 0	0 9 0	0 11 0	0 9 0	0 9 0
	Payments by Railway to Port Commissioners.	0 2 3	0 2 3	0 2 3	0 3 5	0 3 5	0 3 5	0 3 5	0 3 5	0 3 5
Balance earned by Railway		2 4 9	1 11 9	1 8 9	2 3 7	1 10 7	1 7 7	2 5 7	1 12 7	1 9 7

NOTE.—Rebate withdrawn altogether
 The despatching end terminal charge was first introduced from 1st January 1917, and
 The rate of the terminal charge paid to the Port Commissioners
 From 1912 to March 1915 Re. 0-2-3 per ton.
 „ April 1915 to March 1920 Re. 0-3-5 „

APPENDIX S.

Vide reply to question 54.

Statement of rates per ton for public coal to Kidderpore Docks.

1920. (From 1st April 1920.)			1921. (From 1st April 1921.)			1922 and 1923. (From 1st May 1922.)			1924. (From 1st January 1924.)		
From Jheriah.	From Asansol.	From Raneegunge.	From Jheriah.	From Asansol.	From Raneegunge.	From Jheriah.	From Asansol.	From Raneegunge.	From Jheriah.	From Asansol.	From Raneegunge.
170	132	121	170	132	121	170	132	121	170	132	121
Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.	Rs. A.P.
0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 2 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0
...	...	...	...	...	...	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0
3 8 0	2 11 0	2 9 0	3 11 0	2 13 0	2 9 0	3 2 0	2 13 0	2 13 0	3 2 0	2 13 0	2 13 0
3 8 0	2 13 0	2 11 0	3 13 0	2 15 0	2 11 0	3 10 0	3 5 6	4 8 0	3 10 0	3 5 6	4 8 0
0 15 0	0 13 0	0 14 0	...	...	...	...	...	...	1 0 0	0 12 6	0 11 3
0 4 6	0 4 6	0 4 6	0 4 6	0 4 6	0 4 6	0 9 1	0 9 1	0 9 1	0 9 1	0 9 1	0 9 1
2 4 6	1 11 6	1 8 6	3 9 6	2 10 6	2 6 0	3 15 5	3 1 5	2 12 5	2 15 5	2 4 11	2 2 1

from 1st September 1920.

the rate of Re. 0-2-6 per ton was enhanced to Re. 0-4-0 per ton from 1st May 1922, varies during the periods shown above as noted below :-

From April 1920 to February 1922

Re. 0-4-6 per ton.

.. March 1922

Re. 0-9-1

Statement showing Coal exported from Calcutta to Foreign and Indian Ports during the following periods—concl'd.

Port.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	April to September 1924.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Brought forward													
New South Wales	...	...	...	...	...	...	...	...	...	...	...	...	...
New Zealand	...	...	...	...	...	6,000	...	...	...	...	...	...	...
Nilla	...	27,672	...	...	...	...	...	...	...	...	807	...	...
Pondicherry	9,638	4,422	3,028	...	1,380	2,018	...	1,671	...	600	...	...	...
Port Blair	2,269	2,610	2,850	2,900	1,250	...	...	2,331	3,884	6,117	4,097	2,580	1,083
Philippines	...	...	...	...	...	...	...	...	14,041	...	...	...	...
Pamban	5,704	...	...	...	...	...	...	...	...	...	21,889	...	...
Port Dundar	...	...	...	...	...	...	...	...	1,822	...	...	...	...
Rangoon	385,786	447,846	427,378	410,396	427,637	201,183	90,741	114,739	370,536	370,354	266,432	477,356	157,993
Sumatra	119,427	97,652	73,810	69,696	79,566	...	5,771	56,322	52,889	...	...	...	...
Straits Settlements	148,301	183,501	100,686	97,474	144,116	68,716	45,763	120,359	190,013	4,567	...	22,348	10,708
Sinn	...	...	1,393	...	5,438	...	...	...	...	...	...	...	...
Savoy	...	...	...	...	...	...	...	...	4,703	250	...	...	...
Tuticorin	37,456	33,312	31,434	31,812	11,875	...	...	6,900	21,623	25,035	17,062	610	11,886
Tavoy	...	...	...	...	...	...	...	...	...	...	90	...	...
Turkey, Asiatic-Persian Gulf	...	...	...	...	...	...	...	...	10,158	...	...	...	...
Uran	...	...	1,824	845	...	...	...	...	...	...	...	...	...
United Kingdom	...	...	...	...	...	...	...	114	...	...	...	...	20
Zanzibar and Pemba	160	...	...	...	...	...	...	...	...	...	...	...	...
Other Ports	8	2,816	8,571	6,490	1,650	...	...	...	...	...	...	...	...
Total	3,071,547	3,636,353	2,603,639	1,631,834	1,313,152	477,513	248,684	879,293	2,395,250	1,392,863	768,367	1,075,609	681,506

APPENDIX U.

Vide reply to question 60.

Sea Freight on Coal in 1924.

FROM CALCUTTA TO BOMBAY.

Per ton.				Per ton.			
Rs.		A. P.		Rs.		A. P.	
4th January 1924	.	8	8 0	20th June 1924	.	8	0 0
11th January 1924	.	8	8 0	27th June 1924	.	8	0 0
18th January 1924	.	8	8 0	4th July 1924	.	8	0 0
25th January 1924	.	8	0 0	11th July 1924.	.	8	0 0
1st February 1924	.	8	0 0	18th July 1924.	.	8	0 0
8th February 1924	.	8	0 0	25th July 1924.	.	8	0 0
15th February 1924	.	8	0 0	1st August 1924	.	8	0 0
22nd February 1924	.	8	0 0	8th August 1924	.	8	0 0
29th February 1924	.	9	0 0	15th August 1924	.	8	0 0
7th March 1924	.	9	0 0	22nd August 1924	.	8	0 0
14th March 1924	.	9	0 0	29th August 1924	.	8	0 0
21st March 1924	.	9	0 0	5th September 1924.	.	8	0 0
28th March 1924	.	9	0 0	12th September 1924.	.	8	0 0
4th April 1924	.	9	0 0	19th September 1924.	.	6	8 0
11th April 1924	.	9	0 0	26th September 1924.	.	6	8 0
18th April 1924	.	9	0 0	3rd October 1924	.	6	8 0
25th April 1924	.	8	8 0	17th October 1924	.	6	8 0
2nd May 1924	.	8	8 0	24th October 1924	.	7	0 0
9th May 1924	.	8	8 0	31st October 1924	.	7	0 0
16th May 1924.	.	8	8 0	7th November 1924	.	7	0 0
23rd May 1924.	.	8	0 0	14th November 1924	.	7	0 0
30th May 1924.	.	8	0 0	21st November 1924	.	7	0 0
6th June 1924	.	8	0 0	28th November 1924	.	7	0 0
13th June 1924	.	8	0 0	5th December 1924	.	7	0 0

APPENDIX V.

Vide reply to question 61.

EAST INDIAN RAILWAY.

Statement of claim for rebate on coal and coke (excluding Bunker coal) exported by Messrs. _____ and Company for the month of _____ 1924. Total weight of coal exported as per Bills of Lading herein referred to _____ Tons Weight carried by East Indian Railway as under _____ Tons, Bengal Nagpur Railway _____ Tons.

DECLARATION NOTE.		Colliery from.	Despatching station.	Destination station.	Weight as per E. I. Ry. Bill.	Rate per ton.	Amount.	Reference to E. I. Ry. local freight Bill.	Weight exported by sea.	Actual freight excluding terminals and extra charges. Rate per ton.	Amount.	25 per cent. Rebate.	REMARKS.
Date.	No												
					Tons Cwt. Rs. A. P.		Rs. A.		Tons Cwt.	Rs. A.	Rs. A.	Rs. A.	

**A. BURBIDGE, Esq., Coal Manager, The East Indian Railway,
F. E. ROBERTSON, Esq., Chief Operating Superintendent
and N. A. S. BOND, Esq., Rates and Development
Manager, the East Indian Railway.**

(Oral Evidence—January the 21st, 1925.)

Mr. Robertson: As regards the suggestion that our troubles in the coal-fields are due mainly to the opening of 200 new collieries, we should not put this down as one of our chief difficulties. It has meant more work, but it has made no great difference because the total raisings have remained fairly steady. The chief reason for our difficulties has been that the wagon stock was left in a very bad state of repair after the war. Now it is getting better the running of trains and the turn-round of stock are improving.

(i) Staff.

1. Organisation of staff for coal traffic.—*(To Mr. Banerjee.)—Mr. Robertson.*—The allotment officer gets Rs. 500 per month.

Mr. Burbidge: As to length of service, the allotment officer at Dhanbad has been many years in the post, but the one at Asansol is new, his predecessor having been transferred on promotion. I do not agree that there are "lots of complaints" in "Commerce" and at meetings of the Indian Mining Federation against the allotment officers or method of allotments.

Mr. Robertson: I do not think that there are any complaints against them. As regards the suggestion on page 59 of the Report of the Coal Conference in 1912, I maintain that we do have a "highly qualified, efficient and special staff" to deal with these matters. *Mr. Burbidge:* The new man at Asansol is highly qualified: he is not without experience.

Mr. Robertson: The District Traffic Superintendent never made the actual detailed allotment, even in pre-war times. His function was merely to supervise and to decide what would be the basis of allotment, *i.e.*, half on basis or three-quarters on basis, etc.

I think Mr. Banerjee is under a misapprehension. "Allotment" (as it is used in the Report of the Coal Conference), means deciding the number of wagons to be allotted. This work is now done from headquarters and was never done by the Allotment Officer. The allotment to individual collieries was done by a branch of the District Traffic Superintendent's office and is now done by the Allotment Officer.

Mr. Burbidge: We give two orders daily from headquarters: at 12 we issue our main orders and at 4 o'clock they ring up from the coalfields giving the approximate indents and prospects: then we give fresh orders.

Mr. Robertson: It is not a fact that late indenters can get wagons before previous indenters out of their turn, except so far as this is sanctioned by the Coal Transportation Officer.

(ii) General questions of wagon supply.

2. Total amount of coal transported.—*Mr. Robertson.*—The weight of coal moved recently has been higher than it has ever been before and there have been fewer complaints about a shortage of wagons.

Mr. Burbidge: We have been giving "full on indent" during the last six months.

Mr. Robertson: We did specially well just before the Pujas when normally complaints might have been expected.

Mr. Burbidge: I am putting in the following statement of coal traffic to Kidderpore, Howrah and Shalimar. The Bengal Nagpur Railway do not send wagons to Howrah: they do to the other places.

EAST INDIAN RAILWAY.

Coal Traffic.

Year.	To Howrah.	To Kidderpore Dock.	To Shalimar.
	Tons.	Tons.	Tons.
1912	687,194	3,363,017	333,229
1913-14	624,940	2,489,906	395,108
1914-15	665,438	2,199,745	408,698
1915-16	639,687	1,366,191	352,024
1916-17	657,722	1,477,407	376,948
1917-18	613,583	698,505	306,416
1918-19	600,497	1,030,957	319,357
1919-20	471,182	1,708,569	328,364
1920-21	752,095	2,254,534	386,727
1921-22	662,003	1,364,181	406,037
1922-23	590,191	1,079,016	441,355
1923-24	513,065	1,102,383	478,551

(To Mr. Bray.)—Mr. Robertson: As regards the question how far the increase in the amount of coal moved has been due to rakes, we supplied rakes previously also, though not half-rakes. Mr. Burbidge: It is hard to allocate the credit between rakes and other factors.

3. Number of wagons supplied to coalfields.—Mr. Burbidge.—As regards Note (a) to the statement in our written reply to this question, for coal loaded at Bhowra for Cawnpore, for instance, the Bengal Nagpur Railway provides the wagons and we do the invoicing and collect the freight.

4. Number of wagons supplied to other traffic.—Mr. Burbidge.—The following is a statement of total earnings on general merchandise and on public coal.

Earnings.

Year.	General merchandise.	Public coal (including coal for foreign railways).
	Rs.	Rs.
1912	3,84,29,761	3,03,75,780
1912-13	3,79,41,208	3,13,54,030
1913-14	3,75,17,293	3,03,43,551
1914-15	3,99,05,566	3,34,51,932
1915-16	3,94,86,183	3,44,36,641
1916-17	3,78,55,447	4,08,31,982
1917-18	3,94,76,068	3,87,91,363
1918-19	4,08,24,056	4,37,10,288
1919-20	4,36,62,250	4,08,85,476
1920-21	4,69,37,758	4,47,73,587
1921-22	4,87,51,522	3,77,23,836
1922-23	5,76,20,627	4,71,50,577
1923-24	5,89,17,661	4,80,38,930

5. Distribution of empties between coal and other traffic.—*Mr. Burbidge*.—Our remark that we aim at the proportion of two-thirds for coal and one-third for other traffic applies to the whole system. It is correct to say that, although coal produces a hundred lakhs of rupees a year less than general merchandise, it gets two-thirds of the wagons. As regards our not working up to this proportion during 1924, I would explain that during certain months of the year we supply full on indent to the coalfields and cannot possibly do more, so at those times the loading of goods is unrestricted. "Full on indent" does not necessarily mean that twice as many wagons are available for coal as for general goods. *Mr. Robertson*: Our reply to question 5 really refers to 1921 and 1922, when there were very heavy demands both for goods and for coal traffic. During those years we kept to this principle, but now with an easier wagon position we do not, and do not need to, restrict goods at all.

6. Influence of wagon supply of (a) additions to, and (b) pooling of, wagons and (c) general improved facilities.—*Mr. Burbidge*.—It is not altogether correct to say that at present we actually have sufficient wagons (even if other facilities were beyond criticism) to handle the whole coal traffic which might offer. At the same time we could not at present handle more wagons than we actually have. (*To Mr. Bray*.)—During the first 17 days of this month a total of 36,000 wagons were allotted to coal as against 30,000 during the first 17 days of January last year. *Mr. Robertson*: We had 1,600 wagons spare yesterday: after meeting full on indent. The daily average of 2,050 wagons given to coal is likely to be improved on. (*To Mr. Legge*.)—I think that even during the first six months of the year when there is a heavy demand for wagons we can improve on the figure of 2,050 a day in future. As it is, we are now being pressed by the Director of Wagon Interchange to take wagons from the B., B. & C. I., although they might have been expected to require all the wagons that they can get at this time of the year. In March-April, when the wagon supply will be really tight, I think we can manage to beat the figure quoted.

(*Mr. Stuart Williams*: I should like to point out that there is a growing tendency for seasonal traffic, e.g., wheat and seeds, to spread itself over the whole year and not to be concentrated as it used to be in one or two months.)

Mr. Robertson: (*To Mr. Legge*.)—The wagon pool has been of great assistance to us. The amount of shunting saved has been enormous and the improvement in the general position is in my opinion due more to the wagon pool than to anything else. (*To Mr. Banerjee*.)—Rakes were given from 1908 onwards. *Mr. Burbidge*: They were temporarily abolished in February, 1916. Half-rakes were introduced in 1922. *Mr. Robertson*: In 1916, the number of rakes allowed was seven for the two districts per day. My recollection is that Dock-traffic had absolute preference in wagon supply at that time. We have not been asked to carry this year the same amount as in previous years when two million tons were moved to the docks.

(*To Mr. Banerjee*.)—We were in debit to the extent of 2,243 wagons yesterday under the pooling system. In November we had a debit of 7,000 odd wagons. The pooling system has come to stay: apart from the number of wagons available under it there is the saving in shunting, the importance of which cannot be over-estimated.

7. Average turn-round of coal wagons.—*Mr. Burbidge*.—In 1912 the turn-round is said to have been 5 or 6 days, but I have nothing to confirm this. (*To Mr. Legge*.)—As regards the average turn-round we are still not satisfied and we are watching things very closely.

Mr. Legge: There was recently a case in which 50 wagons were loaded at Banksimulah colliery for the steamship "Sirsa": these did not arrive at the docks in one rake but instead 36 came on the 7th and 13 on the 8th January, while one came on the 9th. I should like to know why it was not possible for the yard-master, knowing that the 50 wagons had been supplied for that ship, to have told his yard-staff to set aside one dock-line for all the wagons, so that they could have been run down alongside the ship as one unit?

Mr. Robertson: Probably it was a different pilot, though the same dépôt station. Also the yard-master probably put the first wagons that came down onto a number of wagons for the docks, which had for some time been standing in the yard, so as to get them off at once. This case reminds one of the advantages of the old days when there would have been a rake of wagons going straight through. We can certainly give a trial to the idea of setting aside a line for a steamer station. At present dock wagons are marshalled together irrespective of steamer stations.

Mr. Burbidge: (To Mr. Stuart Williams.)—The notice of stations being opened influences allotment but does not influence transportation. The way in which a rake is despatched and worked ignores the fact that a steamer is waiting at the docks. We do not have the running of wagons to Kidderpore followed by any high official: all trains must take their turn, *vide* our written answer to Question 42 *re* preference to dock trains.

(To Mr. Whitworth.)—We can look into the case quoted in which 50 wagons loaded at Damodarpur on one day came down to the docks by dribblets for the Chief Mining Engineer.

Mr. Robertson: They would all have gone down on full train loads of sixty wagons to the docks even if they went by dribblets.

(To Mr. Banerjee.)—*Mr. Robertson:* It would be a colossal task to get figures showing the detailed running of coal trains and the time, (1) from colliery to the weighbridge, (2) at the weighbridge, (3) in the marshalling yard, (4) running, (5) for detention at various points and (6) of arrival at the docks. We do not admit that it takes longer now-a-days to get a wagon down to the docks. Every week we get a statement in showing the time taken by wagons in getting down to the docks. The average is 45 days including the time in transit on the B. N. Railway on wagons booked from sidings served by that Railway. This figure includes all wagons, even if they are 24 days in getting down to the docks owing to damage, etc.

Mr. Burbidge: We have just abolished the vehicle movement branch.

Mr. Robertson: There is no object in our knowing what happens to any particular wagon. What we have to check is the general movements from the coalfields. The work involved in checking the journey of 2,300 wagons per day is out of all proportion to the result. We do not admit that the fact of the Eastern Bengal Railway keeping up a Movement Branch staff is any reason why we should do the same: we claim that our wagon-miles compare favourably with theirs.

We do not marshall the dock trains at Bandel: we do not admit that to do so would prevent long delays at the docks:

(iii) *Indents and allotment to collieries.*

9. Over-indenting.—*Mr. Burbidge.*—As regards the advantage of allowing over-indenting as contrasted with a system of alternative indents, in my opinion the former is the more flexible system and fits in better with railway requirements. I admit that the present system of over-indenting is wasteful in that a manager who wants 8 wagons, 4 for one destination and 4 for another against a siding capacity of 12 wagons, will indent for 24 wagons instead of 8 in order to improve his chances of getting the number that he wants: if wagons are then granted full on indent he is given 12, *i.e.*, 4 more wagons than he really needs. As to this, all I can say is that it is up to the manager not to over-indent.

Mr. Robertson: I may mention that every day we get some wagons cancelled, for example, on the 18th 93, on the 17th 48, and on the 19th 50. This shows that the collieries are asking for more than they want. Unless the manager cancels them in time he has to pay for them. *Mr. Burbidge:* They can cancel them although we do not give them prior information of what they are going to get, because they have their own ways of finding out what is being done. *(To Mr. Banerjee.)* The percentage of such cases is small and we do not complain of these cancellations.

(*To Mr. Legge.*)—The tendency of collieries to over-indent also upsets our allotment figures to some extent. The reason why it is allowed is that it helps the smaller collieries. There will be a lot of clerical labour involved in running an alternative indent system, but there would be no difficulty of running the system if the number of alternative indents was limited. We would be prepared to go into this matter more carefully than we have done.

(*To Mr. Stuart Williams.*)—I should not think that a small colliery does better than a large colliery on the indenting system : it can only get the number of wagons for which it has accommodation. *Mr. Robertson:* The supply of wagons, in fact, is made on basis and not on the number indented for.

Mr. Burbidge: (*To Mr. Banerjee.*)—I cannot state the number of restrictions on routes : it depends on the routes referred to.

10. Wagon supply compared with indent.—*Mr. Burbidge.*—The figures show that there is a certain amount of over-indenting for loco. coal. The reason for this is that loco. coal is worked on a programme and we do not allow more wagons than the Chief Mining Engineer has provided for in his programme. We follow exactly the same procedure as we do for our own loco. coal. If a contractor asks for more wagons than has been laid down by our programme we refuse them : for example, if the programme allows him six on a certain day we would not give him 8 or 12, even if he indented for them.

(*To Mr. Legge.*)—The collieries tend to over-indent when they have fallen into arrears, or, for example, when holidays are near, on which loading will be impossible. The excess of indents over supply is due to the collieries not having indented up to the programme on previous occasions. This might be due to their having loco. orders as well as orders for rakes and half-rakes. (*To Mr. Whitworth.*) A colliery might miss its supplies owing to an accident on the line : in that case we should make up the deficiency but only with the permission of the authorising officer, for if we did it without such permission we might upset the authorising officer's arrangements and also upset industrial supplies. (*To Mr. Banerjee.*) When a route is restricted we cannot send wagons over it at all and it would be futile to give wagons for loco. coal over such a route.

(iv) *Capacity to handle coal traffic.*

11. Wagon capacity of coalfields.—*Mr. Burbidge.*—We are working up to our total average capacity. The reason for our not doing so last year was mainly the want of wagons. (*To Sir Rajendra Nath Mookerjee.*)—By this I do not mean that the total number of wagons in India was necessarily short, but the wagons were not available for our use for coal : they might have been higher up the line or they might have been coming down to us.

(*To Mr. Banerjee.*)—We run two trains from Bokaro siding and one from Kargali. The figure of 50 for Bokaro is an average figure : it should not, therefore, be 100 : it is correct as it stands. *Vide* our reply to Question 18.

12. Maximum capacity for export and bunker coal.—*Mr. Burbidge.*—On the figures which we have given in our written reply there would be a margin of 200 wagons for the Docks and Howrah, if the coal were offering. *Mr. Robertson.*—But, as a matter of fact, we are now doing very heavy downwards traffic and we find it difficult to do more. Our nominal capacity below Burdwan is 30 trains and we are now running 26, 27 or 29. *Mr. Burbidge.*—However, we might do another 100 wagons, say two trains a day.

Mr. Robertson.—As regards the Ondal-Khana section, we do not propose to double the line on this section at present, but the running capacity of the section will be improved by the alterations which are now in hand in the Burdwan yard and by the additional sidings to be provided at Bandel. We think that by the rearrangement at Burdwan we can increase the capacity up to 48 trains. Also we set great hope on the Bally bridge which is not finally sanctioned yet.

(To Mr. Legge.)—The places where these measures will be taken are outside the Ondal-Khana section, but they will improve running on it.

Mr. Burbidge.—I should like to point out that traffic to the Docks fluctuates a great deal as the following figures will show. There are only three boats now loading coal and only one expected.

THE COMMISSIONERS FOR THE PORT OF CALCUTTA.

Kidderpore Dock Berthing List for 20th January 1925.

COAL BERTHS.

Berth No.	Name.	Berthed.	Leaving.	Vessels following.	
				Name.	Due.
15					
16					
17 . .	Hartfield (C)	10-1	21-1		
18					
19					
20 . .	Out of commission 16th January 1925.				
22 . .	Binfield (C)	15-1	21-1		
23 . .	Wintfield (C)	11-1	22-1		
28	....	..	..	Electro Stavrondi (C).	22-1
H. H.					
R. S.					

Vessels delayed awaiting coal—Nil.

C.=Coal exports.

I think that there is no way in which the railway can keep the collieries posted with information as to when there will be a change in conditions of supply owing to restrictions, even though I recognise that the information would be of the greatest assistance to firms dealing in export coal. The collieries keep in touch with the District Officer and this is as much as can be done. I could not at present tell you, for example, what wagons will be given to-morrow. The only way in which theoretically anything could be done would be to ring up the collieries in the evening and tell them what is going to happen in the morning: but there might be a big accident meanwhile which would upset the proposed arrangements altogether. I am quite prepared to do all that I can to help, but it is difficult to make any practical suggestion. Mr. Robertson.—If an accident occurs that is likely to stop the flow of the empties, we might give special information, but normally the collieries know what the supply is likely to be. If any one came and asked how matters stood we could tell him, but we do not know the individual collieries interested in shipments from day to day. Mr. Burbidge.—(To Mr. Legge.)—I agree that if preferential supply were given to export coal as in 1916, it would be the best remedy for this difficulty.

(To Mr. Stuart Williams.)—Mr. Robertson.—In the last para. in Question 12 the word 'by' is not a misprint for 'to' in the remark that the maximum amount that could be handled might be increased by about 800 wagons a day. The remark does not refer to the amount of coal coming down to the Docks, but to down-country traffic generally.

Mr. Burbidge.—We would be prepared to consider, I think, the suggestion that a responsible railway running officer might be seconded for a time to the Port Commissioners, so as to learn the details of their work and the difficulties which they have to face.

Mr. Robertson.—I think that it is a matter to be put to the Agent, but there is no objection so far as this Department is concerned.

(v) *Working of sidings.*

13. Working of sidings.—(To Mr. Legge.)—Mr. Burbidge.—The main reason why there are complaints about irregular times of wagon supply in collieries worked on the 20-hours system is that the pilots are detained waiting for empties.

Mr. Robertson.—It would not be an improvement to send out the pilots without the wagons for which at present they wait. What happens now is that the day before the supply, when the allotments are made from Calcutta, prospects as reported may be very low but we anticipate that we can do better and so we allot more wagons: if we do not hold to the allotment it means later a lot of calculations for if the wagons are not supplied according to allotment, the Railway must make up the figure later. The alternatives to be faced are either that the pilots are a bit late in delivering the wagons or that they would be in time and that a couple of hundred wagons perhaps would be left lying on hand for 24 hours. Mr. Burbidge.—It would lengthen the time of duty for the pilots if they had to go out separately with the late empties, while if the pilots did not wait as they do now and did not go out again, the collieries would not get so large a supply of wagons.

(vi) *Weighment, marshalling and despatch of wagons.*

14. Weighment, marshalling and despatch of wagons.—Mr. Burbidge.—Colliery representatives are permitted to be present at the weighbridge when their own wagons are being weighed. Advantage is taken of this only to a very small extent. The men turn up some time or other during the day, but I do not say that they are present when their own wagons go through.

I cannot say how many steelyards we have, but I shall give the Committee a statement later. Almost all weighbridges are automatic: we are replacing the steelyards with these. The steelyard at Raniganj has been closed and we are weighing at Ondal instead.

Mr. Robertson.—We do not intend to put in gravity yards at Giridih or Barakar. They are not wanted there.

(To Mr. Banerjee.)—Mr. Burbidge.—We do not tell the collieries when their wagons will be weighed. The colliery clerks know well enough when their own wagons are coming along.

I do not admit that there are mistakes in weighing. There is no difficulty in seeing what the weight is on an automatic weighbridge dial: I have done the work myself and know that it is quite easy. The dial is about 4 feet in diameter and there is only the very slightest shake in the needle.

If we put weighbridges in at the sidings which are used for shunting facilities there would have to be a small yard at each. Mr. Robertson.—I think Mr. Banerjee refers to Gathering Sidings. If wagons were weighed on these the pilot would be held up and could not complete his load. Then the question would arise whether the number of pilots would have to be increased. The alternative would be for the pilot to go into the depôt-station with a small load which is impossible. The weighment could not be done while the pilot was doing other work, because there would be nothing to move the wagons.

Mr. Burbidge.—As regards the proposal that the number of weighbridges should be increased, Ikra was once a weighbridge station but has been closed: Jamuria never was, it is not on the main line and if opened as a weighbridge station it would be a sub-depôt station. Mr. Robertson.—It would be no help to the railways but it might be a convenience to Andrew Yule's collieries on that section.

Mr. Burbidge.—The colliery weigh-clerk gets a free pass and may travel in the pilot brake van. I do not think that, if we provide more sub-depôts, it would hurry up the traffic. To show of how little use some of these sub-depôts are I would mention that at Gourangdih weighbridge only some six wagons a day pass through. The only advantage that would be offered by the provision of private weighbridges at collieries would be that we should be free

of overloaded coal in our yards. This is a question which the Agent has considered. *Mr. Robertson.*—It might facilitate getting out train-loads if the wagons from a colliery were for one destination.

(*To Mr. Legge.*)—*Mr. Burbidge.*—The weighing clerk at the weighbridge in a colliery would have to be a railway clerk: he will have to know all about the railway rules and would certainly have to be under the orders of the District Traffic Superintendent. *Mr. Robertson.*—I do not think that there will be any risk of overloading at the colliery if the weighbridge were there, because our own man would be there to guarantee safety. The weighbridge would be under us, it would be looked after by our fitters, etc., and we should do everything in connection with it. I mean that the pilot guard would have to do the gunnering. This would increase his shunting hours, but probably a colliery that was big enough to put in a weighbridge would be big enough to keep the pilot fully employed.

Mr. Burbidge.—(*To Mr. Stuart-Williams.*)—I expect that it would involve an extension of the pilot hours, not an addition to the number of pilots. The introduction of private weighbridges would have to be universal, otherwise we would get some wagons coming into the yards that had been already weighed and some that had not been. And this would increase the work of marshalling. (*To Mr. Whitworth.*)—I agree that the Kargali weighbridge is of use to us: but that traffic is being dealt with very specially. The wagons from Kargali go through Katras: they take only half an hour there because we merely have to reverse the engines. Then they go to Gomoh where they are looked over by the Carriage Examiner: you may take three hours for that. *Mr. Robertson.*—You had better say five hours. *Mr. Burbidge.*—You might say then that they take half a day in the marshalling yard. I agree that, on this calculation, the installation of weighbridges in large collieries would save about two days in the yard, if the wagons concerned were for one destination. I agree that if the Chief Mining Engineer would always arrange that the trains were made up at other collieries as they are at Kargali it would save time to have private weighbridges in collieries. *Mr. Robertson.*—It would not save time in the marshalling yards if the wagons were in half rakes. *Mr. Burbidge.*—The whole thing needs a lot of consideration.

(*To Mr. Legge.*)—*Mr. Robertson.*—Personally I prefer to have the weighbridges where they are. When you concentrate such work you speed it up. With weighbridges in the yard you can supervise them adequately: if they are spread about they are difficult to control. It would only be for the convenience of collieries that we would consider sub-depôts. I do not think that we could get in a sub-depôt on the Kusunda-Katras side as suggested by Messrs. Bird & Co. in their evidence before the Committee. There would not be room, probably, at Bansjhora. We shall see whether the idea is practicable.

(*To Mr. Legge.*)—*Mr. Burbidge.*—If there were a defect discovered in a weighbridge we should either have to hold up the traffic or pass the wagons on their carrying capacity, although this would mean a danger of overloading and of accidents in consequence. At most places there are two weighbridges, for instance, at Jherriah there is a steelyard as well as an automatic. *Mr. Robertson.*—I have never known such a case so far as I can remember.

(vii) Extensions and improvements to depôt yards.

17. Improvements to depôt yards.—*Mr. Burbidge.*—Asansol is small considered as a depôt station. The remodelling of the down-yard will not alter its capacity as a depôt. Its present capacity is 100 wagons. The present capacity of Ondal is 500 wagons and the alterations will not affect this. (*To Mr. Legge.*)—We usually do all the work of surting at Ondal. (*To Mr. Stuart-Williams.*)—After the alterations at Ondal are completed we would still ask the Docks to separate loaded from empties before despatch upwards.

(*To Mr. Banerjee.*)—*Mr. Robertson.*—I do not think that it will be possible to build a yard which would be big enough to hold the total number of wagons which could be held by all the sidings served by it. *Mr. Burbidge.*—

During these last six months the supply of wagons to the collieries has seldom been restricted owing to the limited capacity of depôt stations.

(viii) *The 10-hours and 20-hours system of supply.*

18. The 10-hours system.—(To Mr. Banerjee.)—Mr. Burbidge.—We cannot work seven pilots within 4 hours from Dhanbad: that would be possible only if we could work with clockwork precision which we cannot do, and anyhow the necessity for dealing there with shuttles prevents it. (To Mr. Legge.)—The existing system of working pilots is the result of years of practical experience.

(ix) *Overloading and load lines.*

19 and 20. Overloading at collieries.—Mr. Burbidge.—I have no statement to show the number of collieries concerned with the wagons on which penalty was realised. Overloading was fairly general. I shall send in figures later. As regards the big increase in penalties for overloading since 1922-23 the scale has been altered frequently. I put in a note on this subject.

Note regarding penalties for overloading.

Through overloading of coal wagons has been a serious obstruction for many years, in the earlier years no actual penalties were charged under this head. At the Coal Traffic Conference held in October 1912 which threshed out the question fully, it was suggested that the margin of loading, i.e., one ton above and one ton below carrying capacity was so meagre that collieries with impunity overloaded wagons to escape the underloading penalty charge. In this year certain proposals were made which have all more or less been carried out, as to granting a greater margin in loading and as to suitably marked wagons, working on the basis of 42 cubic feet per ton, a figure decided on as being the most workable. Despite all these concessions five years saw little improvement. The percentage of wagons overloaded as compared with the total wagons loaded remained unsatisfactory, and eventually in October 1917 it was decided to put on a small penalty. At this time the Government had commandeered all coal, and in the case of "Overload" coal which up to this period was being returned to collieries, it was arranged that all this coal should be loaded by the railway and made over to the Loco Department. The first penalty was laid on weight, i.e., Re. 1 per ton exceeding 5 per cent. of the total quantity despatched, which penalty was deducted from the amount paid to collieries for value of "Overload" coal made over to Loco. This, however, proved no penalty, in fact the collieries benefitted by it. Eventually on the recommendation of Messrs. Marshall and Chase of the Railway Board, who held an enquiry on the Coal Districts, the penalty was altered from a weight charge to a wagon-charge, and this was accepted and brought into force from 1st December 1918; after pressure from the collieries the penalty was reduced from Rs. 5 to Rs. 2 per wagon allowing 8 per cent. Overloading, however, still continued at a high figure, and it was finally decided that "Overload" coal should again, as before, be returned to collieries, and a sliding scale of penalty introduced, heavier than any previous penalties, but this even has not proved a deterrent as figures show. Details of all penalties imposed from time to time are given below. At the present moment we are working on IV D.

I. 1st October 1917 to 30th November 1918.—Re. 1 per ton exceeding 5 per cent. of the total quantity despatched. This penalty was deducted from value of coal made over to Loco.

II. 1st December 1918 to 30th September 1919.—Rs. 5 per wagon allowing 8 per cent. on the total number of wagons despatched.

III. 1st October 1919 to 14th November 1922.—Rs. 2 per wagon allowing 8 per cent. free on the total number of wagons despatched.

IV. A. 15th November 1922 to 28th February 1923.—On sliding scale. Making over of coal to Loco ceased. Collieries were given the "Overload" coal and were required to pay penalties in cash or by cheque.

5 per cent. and under	Nil.
Over 5 per cent. to 8 per cent. . .	Rs. 3 per wagon
Over 8 per cent. to 10 per cent. . .	Rs. 5 per wagon
Over 10 per cent.	Rs. 15 per wagon

IV B. 1st March 1923 to 31st July 1923.

5 per cent.	Free.
Over 5 per cent. to 8 per cent. . .	Rs. 2 per wagon.
Over 8 per cent. to 10 per cent. . .	Rs. 3 per wagon
Over 10 per cent.	Rs. 10 per wagon

IV C. 1st August 1923 to 28th February 1924.

Over 5 per cent. to 8 per cent. . .	Re. 1 per wagon
Over 8 per cent. to 10 per cent. . .	Re. 1-8 per wagon
Over 10 per cent.	Rs. 5 per wagon

IV D. 1st March 1924 to date.

5 per cent.	Free.
Over 5 per cent. to 7 per cent. . .	Re. 1 per wagon
Over 7 per cent. to 10 per cent. . .	Rs. 3 per wagon
Over 10 per cent.	Rs. 10 per wagon

Mr. Burbidge.—Even so the number of wagons overloaded is not decreasing according to our latest figures.

The overloading by collieries I should ascribe rather to lack of supervision than to reliance being placed on the load line. We have not considered the advisability of doing away with the line: we put it in on the recommendation of the 1912 Conference. I will not say that it does more harm than good, but it is only meant as an approximate guide. Mr. Robertson.—We might find out what use it is by checking results on foreign wagons which generally have no load-line mark. Mr. Burbidge.—A good many foreign wagons now have the lines. The solution would be the use of our formula by which collieries could mark their own load lines; but this was rejected by the trade. A standard type of wagon would to a certain extent be a remedy but the difference in specific gravity would come in. We were prepared to give them a ready reckoner showing every type of wagon and the figures for all specific gravities of coal. This would have saved them the necessity of doing any calculation. (To Mr. Banerjee.)—We have had no complaints in the Calcutta office that collieries which have followed the formula have none the less been charged for overloading and underloading: possibly the District Officers have some.

(To Mr. Banerjee.)—As regards the suggestion that wagons should be detained for reweighment on application from the colliery concerned we cannot hold up wagons indefinitely, waiting till someone from the collieries comes to see them weighed. It would be no solution to our difficulty to say that the demurrage would be paid by the colliery if the Manager's doubts as to the weighment of coal or the correctness of the tare of the wagons turned out to have been justified: for what is demurrage compared to the potential earning capacity of a wagon? (To Mr. Legge.)—Holding up and reweighing such wagons would interfere greatly with the work of the yard: we should have to cut out and bring back the wagons concerned from the middle of other wagons on a siding, upsetting the weighment of the wagons that were waiting at the bridge. Also to test the tare of a wagon you have to unload it: so, if the colliery representative was still unsatisfied when reweighment proved the figures previously given to have been correct, it

would be necessary in order to test the tare to hold up the wagon while we unloaded and weighed the tare and this (To Mr. Banerjee) would certainly give far more trouble than reloading overloaded coal in the ordinary way.

(To the President.)—The only way of testing the tare is to put the empty wagons across the weighbridge. We test the wagons if we get specific complaints which seem not without foundation, but the Carriage and Wagon Department tare the wagons carefully before they leave the shops. If a definite complaint were made by the responsible man on the spot there would be a reference to the District Traffic Manager and if he was satisfied that it was a genuine complaint the wagons would be tested. But wear does not increase the tare.

(To Mr. Bray.)—I am satisfied that the weighments and the recording at the weighbridge are accurate. As to the specific gravity of coal the wagons are marked fairly accurately for Jharia first class coal and the margin of 2 tons would be sufficient for all such coals if the line were followed but the reason why penalties have to be imposed is that there is carelessness at the collieries. (To Mr. Legge.)—I agree that one reason is the fear of loading contractors that they will be debited with the penalty if they underload. The margin for underloaded coal is sufficient if the loading is done with intelligence.

(To Mr. Stuart Williams.)—The restriction on loading is definitely to secure the safety of axles and bridges. As to their being permanent, of course the adoption of a standard wagon will help but the restrictions depend also on the strength of bridges: if these will not take more than 16 tons per axle, restrictions are inevitable. There is no easy solution if the full economic value of our plant is to be got.

(To Mr. Banerjee.)—We would not agree to the removal of underloading charges with the idea of reducing the amount of overloading, which might as Mr. Banerjee suggests to some extent be the result of a desire to avoid paying dead freight. To remove those charges might lead to our hauling non-paying loads. We cannot introduce any system of charging on the carrying capacity of the wagon: if we did, what would the trade do as regards the acceptance of railway weights by the consumer? The consumer would not like to pay freight on wagon capacity when he received several tons less of coal.

(To Mr. Banerjee.)—We cannot permit overloading because some wagons can hold far more than the safety-load, by 2 or 3 tons; there might be a serious accident. I cannot give any opinion on the suggestion for charging no overweight if the wagon is loaded flush.

(To Mr. Banerjee.)—The increase in the penalty for overloading was due to the increase in the percentage of overloading. It was not decided in the last agreement, made in March last year with the Association and the Federation, that if over 5 per cent. of the wagons were not overloaded the penalties would be reduced. Also it is not a fact that the percentage of wagons overloaded has fallen below 5 per cent. The total number of wagons overloaded was higher than the number which is shown in our written statement as paying a penalty on over-loads. The total percentage of wagons overloaded in December 1924 was 5.43. That was the lowest reached last year. It has not fallen below 5.

(To Mr. Banerjee.)—After overloaded wagons have been adjusted they are not all of them reweighed and readjusted, but some of them are as a test.

(x) Demurrage.

23 and 24. **Demurrage.**—Mr. Burbidge. (To Mr. Legge.)—It is a fact that if 19 out of 20 wagons were loaded and one left unloaded the whole 20 would be left in the siding by the pilot unless the colliery give a D. Note for the others. (To Mr. Whitworth.)—If the empty wagons were in front it would mean marshalling the whole lot to get the 19 out. If the colliery gave a D. Note including the empty or partially loaded wagon and if all were

then removed the colliery would have to pay on aggregate minimum of two tons per wagon less than the whole carrying capacity. If the pilot drew out the whole lot with the idea of returning the partially loaded wagons later, there would be difficulty at the depôt station. It is of course a fact that to leave 10 loaded wagons in a siding because an eleventh wagon is not ready means losing 240 wagon hours. *Mr. Robertson.* It would be difficult to guarantee the return of the particular wagon to the particular colliery especially if there were a number of such cases on one day and on one section. We might perhaps try it. *(To Mr. Banerjee.)* The railways are diffident about introducing this sort of change because one man might make the whole thing impossible, for example by loading every alternate wagon out of 20 or 24. That would mean several shunts to take out the loaded wagons and replace the partly loaded. But if these are at the back and can be uncoupled we could as an experimental measure, allow them to remain and draw out the rest while if they are in front we could take away the whole lot and return the partly loaded wagons afterwards. *Mr. Robertson.*—In my opinion the troubles of the collieries in connection with demurrage are usually due to lack of supervision on their own part.

Mr. Burbidge.—I have had a great deal of general experience of collieries. In my experience the Colliery Manager does not supervise despatches but leaves them to the loading Sirdar or whatever the official is called. I agree that this may perhaps be due to some extent to Managers being paid on raisings and not on despatches.

(xi) Check on delays in Transit.

25. Prevention of delays to wagons.—*Mr. Burbidge.*—If a wrong wagon is supplied for a certain destination we do not penalise the colliery where an obvious mistake has been made by the railway.

Mr. Robertson. (To Mr. Banerjee.)—Mr. Banerjee's insinuation that we do not arrange for proper sorting is answered by the fact that, out of 2,200 wagons or more put in per day, the number of unsuitable wagons provided is one or two a day at most. This fact warrants no special mention and no special attention. All that happens is that the colliery people lose one wagon that day and it is made up to them later.

Mr. Burbidge.—The District Traffic Superintendent could not give the information why no wagons or less than allotted had been supplied on the next day's challan but he could do so a few days later, if there was any object in it.

As regards the point that when a colliery has indented for both public supplies and emergency or loco supplies, it may get a supply of loco or emergency only although public supply wagons are available. I can only say that we follow the priority laid down in the orders: if a colliery chooses to indent wrongly, that is their affair and not ours.

Mr. Burbidge. (To Mr. Legge.)—The way in which we check the work of the Pilot Guards and the time at which they place the wagons in sidings is by comparing one record against another. The check on the supply pilot is by a comparison of the challan entry and the Joint Coal Pilot Report of the Guard and the Driver. These checks are regularly made. There are a number of means of checking. If we suspect anything is wrong we give an Inspector a Joint Coal Pilot Report and let him check it by personal investigation. He will catch the pilot guard out on some point or other if anything is wrong. Generally speaking, we are satisfied with the out-door supervision.

Mr. Robertson.—On the Asansol district we have an out-door officer (called Out-door Assistant) whose time is devoted to supervising the movement of stock. He goes about his district and visits sidings but I do not know that he ever does this by night. In Dhanbad the District Traffic Superintendent is out so much in connection with enquiries (he has a motor trolley and a motor car) that a special out-door assistant is thought unnecessary. He inspects in the morning, so I agree that the railway staff

would expect him then: but he ought to be able to keep a close check on their work by his knowledge of the general work being done. The individual check in this district is by the District Inspectors: there is also a Controller who knows the movement of every pilot and can say why one pilot took longer than another. I do not think that a special man is necessary on the Dhanbad section. There is usually no night inspection but an equivalent check is possible from observing the results of work. It might help if we told the District Traffic Superintendent to let the Colliery Managers know when he is going to visit their collieries. To have an Out-door Assistant at Dhanbad would mean posting another officer there. We might consider this.

(xii) *Co-operation of Collieries.*

26. Co-operation of collieries with the railways.—*Mr. Robertson.*—As regards paragraph (c) of our reply, I put in the remark about collieries sometimes almost seeming to go out of their way not to load wagons for the same destination together because I had just been examining the movement of a series of wagons and I found amongst other instances one in which among 76 wagons loaded for 3 destinations (1, 2, 3), by one big colliery the wagons for the three several destinations followed each other 1, 2, 3, 1, 2, 3, 1, 2, 3, etc., as if they had been arranged that way on purpose.

Mr. Burbidge.—We do our best not to put wagons into the sidings with open and covered wagons intermixed, but if a covered wagon were loaded downwards it would not be stopped. We only ask the collieries if they will try to load covered wagons upwards and open wagons downwards; but there is no penalty if they do not observe the request and it would not prevent them from loading wagons by groups. (*To Mr. Legge.*)—I imagine that much of the difficulty is really due to the collieries not being willing to carry coal from a heap to another wagon a little distance away.

Mr. Robertson (To Mr. Stuart Williams.)—Although we ask the Port Commissioners to marshal the open and covered wagons separately at dock junction upwards the wagons are put in to the colliery sidings as they come without any effort being made to keep the open wagons and covered wagons separate. It is impossible to sort them out. The reason why the Port Commissioners are asked to marshal covered and opened wagons separately is that the covered and open empty wagons have to go up the loop line and if they were not marshalled at the docks they would have to be marshalled at Burdwan. From upcountry we bring down empty open and covered wagons on separate trains. We cannot discriminate when supplying the collieries.

(*To Mr. Legge.*)—We cannot separate the covered wagons and the open wagons in the dépôt yards because it would take too much time.

Mr. Robertson. (To Mr. Stuart Williams.)—The pilot guard gets a maximum of Rs. 210 plus allowances. He can rise to be an assistant Yard Master or even Yard Master drawing up to Rs. 530 per month. So it may be gathered that they are quite a responsible class of men.

(xiii) *Wagon supply.*

28. Supply of open wagons only to particular collieries.—*Mr. Burbidge.*—The orders to which we refer in (b) of our written reply are in force now: they were reissued in about April last. We have ordered the District Officers to make a special check and we are assured from time to time that this is being done. No difficulty has been brought to my notice about the supply of open and closed wagons, grouped separately, to pilots before they go out. The sorting of wagons has been immensely reduced by the wagon pool. The amount of work entailed by separating covered from open wagons would, I admit, be comparatively small, as contrasted with the amount of marshalling that had to be done before the pool came into force.

Mr. Robertson.—As regards our reply to (c) there is no guarantee that the open wagons will be used for loading to the docks unless the railway decline to take those wagons anywhere else.

(*To Mr. Stuart Williams.*)—*Mr. Robertson.*—As regards the statement of witnesses of the committee that wagon difficulties made their mechanical loading plants practically useless I can only say that we have had no definite and continued complaints.

29. Double wagon supply to collieries with mechanical loading.—(*To Mr. Legge.*)—*Mr. Burbidge.*—The figures in appendix "N" under "capacity of plant in wagons per day of 24 hours" must have been obtained from collieries by the District Officers.

(*To Mr. Stuart Williams.*)—With a view to helping Indian coal to recover foreign markets we could guarantee a wagon-supply if there were rakes of 60 wagons being loaded with mechanical plant at the colliery for despatch straight through as train loads to the docks where they would be loaded mechanically into the ship so that some definite guarantee could be given that the coal was from a particular colliery and free from admixture of other coals.

31. Splitting up of rakes among collieries on the same pilot-section.—*Mr. Robertson.*—It has always been the endeavour of the Railway to deal with rakes as with one unit and to carry this out it would be necessary to collect the wagons on the section and this will mean very considerable shunting if the wagons have to be drawn from several sidings a distance apart.

It has not been customary to make any special effort to bring wagons for one ship down to the Docks on the same train. As wagons are passed over the weighbridge they are run into the line allotted to the station to which they are consigned and this would account for the wagons on one rake becoming separated as mentioned by Mr. Legge. I doubt if it is possible to allot one line for the reception of a rake but we will give the suggestion a trial.

Mr. Burbidge.—Even at Pathardihi it would not probably now be possible. *Mr. Robertson.*—At Ondal all the 13 down lines have each a separate destination allotted to it. We have made a note however to try what can be done. (*To Mr. Banerjee.*)—*Mr. Burbidge.*—I know nothing about any splitting up of rakes in pre-war times. *Mr. Robertson.*—We did not to my recollection ever split up rakes. So far as I remember a rake was 50 wagons put in at one shunt and taken out at one shunt. We did not even allow half rakes. I was District Traffic Superintendent at Asansol from 1910-12 and at Dhanbad from 1912-13. I can remember only one exception and that was at Prankrishna Chatterjee's sidings. The reason for the exception was that there was no demand for rakes on the Asansol District and the two sidings were within a few hundred yards of each other.

(*To Mr. Banerjee.*)—*Mr. Burbidge.*—As regards our remark in (a) in our written reply to this question we certainly do not get the same amount of difficulty if rakes are split up between sidings on one section under one management as we should do if the sidings were under different managements. I would refer to our remarks later in the written reply as to the number of collieries answering the present conditions being small.

(iv) *Prepayment of freight.*

33. Objection to return to the "freight to pay" system.—(*To Mr. Banerjee.*)—*Mr. Burbidge.*—I know nothing about collieries prepaying freight even if they are not paid in advance by the consumer: all that I can say is that we get prepayment unless the coal is despatched on the bill system. The locking up of money in the prepayment of freight is a point to be settled by the colliery with the consumer. Restrictions in force and the names of consignees to whom booking is stopped are notified on the back of the wagon challans but we cannot, on the analogy of this, issue lists of hundreds of names of persons to whom prepayment is compulsory. The present method is the simplest way of meeting our difficulty. I cannot give a statement of the loss incurred on unrealised coal freights as compared with total earnings of coal: no such statistics are in existence.

Similarly we have no statistics showing the proportion of bad debts to total earnings. *Mr. Robertson.*—We deal with other commodities as to which same problem has arisen in precisely the same way by insisting on prepayment. Instances of this are stone and gypsum, on which we are going to enforce prepayment shortly. This is not in our rate book but is laid down in rate circulars. *Mr. Burbidge.*—We have introduced a system of bi-weekly payment of freight that is we send out bills twice a week. The bills for the first three days of the month go in on the 8th. No action is taken if payment is not made for 9 days. Then I note on the ledger “remind.” Three days later if nothing has been done I say “stop supplies.” Thus the colliery has 19 days in which to pay for stuff booked on the 1st of the month.

(xv) *Sidings.*

34 to 36. **Applications for sidings.**—*Mr. Burbidge.*—I have not got a list of sidings for which applications are pending. It will have to be asked for from the Agent.

The total capacity of sidings is shown in the statement which I put in.

STATEMENT OF COLLIERIES, SIDINGS AND LOADING ACCOMMODATION ON E. I. RAILWAY.

	(1)			(2)	(3)
	TOTAL NUMBER OF COLLIERIES.			TOTAL NUMBER OF SIDINGS.	TOTAL ACCOM- MODATION.
	European.	Indian.	TOTAL.		
Dhanbad District .	76	339	415	295	7,400
Asansol District .	94	155	249	199	6,400
			644	494	13,800

The suggestion that sidings might be put in as private sidings to start with but taken over as Railway or Assisted Sidings later when it has been proved that they pay, depends on the terms on which the sidings are originally sanctioned. There is a case near Ondal in which the railway has taken over an assisted siding which used to belong to six men who never could agree among themselves, with the result that now we can allocate as we please to it. There is no definite basis on which sidings are granted.

(xvi) *Preferential wagon supply for export and bunker coal.*

37. **Preferential wagon supply for export and bunker coal.**—*Mr. Burbidge.*—I suppose that our remark as to serious consequences to consumers in India is based on the reasons for imposing the embargo on export. I do not know whether the railway has considered that three-quarters of the coal exported by sea from Calcutta is intended for consumers in India. *Mr. Robertson.*—The suggestion for preferential supply was resisted by the Upper India Chamber of Commerce and the Ahmedabad Coal Consumers. I should say that it was a subject to discuss with the Agent.

38. Possibility of preference being conditional on not over-indenting.—(To Mr. Legge.)—Mr. Robertson.—In giving our reply we did not consider the possibility that there might be no Coal Transportation Officer to authorise special supplies. But would the collieries over-indent? The coal would come down to the docks if they did and we should not allow them to rebook. Again the Port Commissioners might reintroduce a dumping charge if collieries brought down supplies in excess. In the old days when the Port Commissioners opened berths they used, I think, to declare the amount of coal to come down to each. Mr. Burbidge.—I may quote two cases recently in which a concern brought down double the amount wanted for the ship actually at the docks on the allegation that they had another vessel coming in very soon.

Mr. Robertson.—We might decline to give preferential treatment to persistent offenders.

Mr. Burbidge.—To follow the principle of so much tonnage for each ship as in the days when there were limits on coal-export would mean keeping up a continuous ledger and this would be rather too much to ask of the railways. I cannot think of any practical remedy.

(To Mr. Banerjee.)—Mr. Burbidge. I do not know of any decision having been given against preference to export coal at the Coal Traffic Conference of 1912. When the rake system was started the railways used to adjust advance supplies but afterwards they dropped this system; *vide* our written reply to question 39.

(xvii) Coal Transportation Officer.

40 and 41. Value of Coal Transportation Officer to railway.—Mr. Burbidge. These are questions really for the Agent. (To Mr. Legge.)—Besides ordering rakes the Coal Transportation Officer also gives small lots, *i.e.*, anything less than 25. In June-July he authorised a large list of half rakes but latterly has not been doing so because we have been giving full on indent. His authorisation of rakes to a certain extent reduces the work of the supply pilot and of the clearance pilot: but I should not care to say that it has done so to a very great extent. If wagon supplies were divided among the collieries *pro rata* it would increase our work a great deal because there would not be so many rakes to deal with. Large Public Supplies mean a great increase in work.

Mr. Robertson.—It is a very difficult question to answer definitely. When we do our biggest loading is the time when the Coal Transportation Officer drops out: he drops out because of the increased wagon supply, and that is why it is so difficult to compare conditions.

(To Mr. Banerjee.)—Mr. Robertson.—I cannot say that the wagon supply has increased with the number of sidings because there is no sort of relation between the two. No difficulties are being felt by us at present.

(xix) Opening of steamer berths.

43. Opening of steamer berths.—Mr. Burbidge (To Mr. Banerjee.)—If a steamer were due on the 13th and the steamer berth was declared open on the 9th there would be no difficulty, on six days' notice being given, about getting down 6,000 tons in time for loading the ship.

(xx) Mechanical loading and unloading appliances at the docks.

46. Unloading appliance at Cossipore Power House.—Mr. Burbidge.—There is a correction to be made in my description of the plant. An open wagon is tipped right over and with such a wagon no door cotters have to be opened.

Mr. Burbidge.—I shall put in a statement showing how many colliery sidings have been opened on the East Indian Railway since 1912.

51. **Classification of coal for rate charging.**—*Mr. Bond.*—We are charging the maximum on public coal for all distances up to 200 miles inclusive, when traffic moves for distances 400 miles and under, on and from the 1st April 1922. This maximum was sanctioned by the Government of India, Railway Department (Railway Board) on and from 25th March 1922. *vide* page xxi of Coal Tariff No. 36 of 15th October 1924.

We have a group rates from Jherriah based under an agreement with the Bengal-Nagpur Railway on 170 miles. Jherriah station is 173 miles from Howrah and Khanoodih 184 miles from Howrah.

54. **Possibility of reducing charges on coal.**—*Mr. Bond.*—I cannot say to what extent our working costs will go down, but we are all doing our best to economise.

57. **Rates and terminals for Loco. Coal.**—*Mr. Bond.*—Foreign railway export Loco. Coal from Jherriah pays exactly the same freight as export public coal, that is Rs. 4-8-6 less Re. 1 rebate or Rs. 3-8-6 per ton. (*To Mr. Banerjee*) As explained in reply to Question 53 there is a loss on export public coal when carried at public rates. To carry it, therefore, at Foreign Railway Loco. Coal rates and grant the rebate as well would result in further loss. We have asked the Government of India, Railway Department (Railway Board) to equalise the Public and Foreign Railway coal rates because from a matter of practical working it is best to have the one rate.

61. **Payment of rebates.**—*Mr. Burbidge.*—The suggestion made by the Bengal-Nagpur Railway that the collecting railway might pay the rebate and debit the other railway with a percentage of the earnings is a matter for the Chief Auditor. I suggest that the Agent should be asked about it.

63. **Rebate on other commodities.**—*Mr. Bond.*—I have not made any comparison between the percentage of rebate granted on coal and iron. The rebate on iron is on a different basis to that granted for coal. The Iron Works granted a rebate are those situated at Kult and Hirapur and before either get any rebate they have to contribute a minimum of 20 million ton miles per calendar year of all traffic over the East Indian Railway. Taking the calendar years 1923 and 1924, Kult has not touched 20 million ton-miles in so far as traffic in raw materials and finished products is concerned but Hirapur has exceeded it.

(*To Mr. Legge.*)—We hope by encouraging the transport of raw material eventually to get the freight on the manufactured article at a higher rate of freight.

(*To Mr. Stuart Williams.*)—It is correct that the rebate is also extended to the finished products for shipment, but the rate of freight charged on the finished products is higher than that charged on the raw materials. The rebate is granted yearly. I may mention that I disallowed the rebate claimed by one of the Iron Works on scrap-iron which is used for the manufacture of pig iron, as in my opinion, scrap-iron is not a raw material. As far as I am aware there is no tendency for the export traffic from Kult and Hirapur to expand very rapidly.

(*To Mr. Legge.*)—People would certainly claim a lower rate quoted for one point to be applied differentially to another point.

(xxiv) *The working of the coal depots at Howrah and Shalimar.*

64. **Position as to the coal depôts.**—(*To Mr. Legge.*)—*Mr. Burbidge.*—In addition to the rent for depôts we charge a terminal at 4 annas 6 pies per ton for the services which we give including placing of wagons, moving them about and shunting generally.

(*To Mr. Bray.*)—*Mr. Bond.*—The rate charged for coal to Shalimar Coal Yard is Rs. 4-8-6 per ton. On coal brought down to Kidderpore Docks, the East Indian Railway pay to the Port Commissioners a terminal of Re. 0-4-6 per ton collected from the public, plus a terminal of Re. 0-4-7 from the revenue of the East Indian Railway. We do not pay the terminal

of Re. 0-4-7 per ton from East Indian Railway revenue to the Port Commissioners on bunker coal at the Shalimar Coal Yard, and are therefore Re. 0-4-7 better off. At Howrah we pay nothing to the Port Commissioners on coal as we do the terminal work ourselves.

65. Coal Dépôt rents.—(To Mr. Banerjee.)—Mr. Bond.—We cannot charge rent at the Dépôts on the basis of 6 per cent. on the original capital value of the land as suggested on general principles by the Incheape Committee. The original value of the land has considerably increased and it would be most troublesome to have to assess it yearly.

Mr. Burbidge.—There are 94 applicants waiting for accommodation at Howrah: and the only way in which to avoid unfair discrimination is to charge a commercial rate. So we came into line with the Port Commissioners.

(Mr. Banerjee.—You show your working expenses at Rs. 60,000 and the rent realised at Rs. 56,000, but you are charging terminal charges as well and I would ask why you do not reduce your terminal charges which were only imposed in 1920.)

Mr. Robertson.—Mr. Banerjee forgets that we have to pay Rs. 6,000 to the Port Commissioners for dredging.

Mr. Bond.—It is true that in the past out of the goodness of our hearts no terminal charge on coal has been levied at Howrah but, with working expenses on the increase and better facilities provided from time to time, a reasonable terminal had to be imposed. It cannot be said that the coal trade has been singled out for unfair treatment in the matter of terminals, as it will be seen from Chapter IX of the East Indian Railway Goods Pamphlet No. I that varying terminals are also being levied on merchandise coming into Howrah. The special facilities provided for the coal trade at Howrah embrace special sidings, dépôts, shunting engines, shunting staff and shoots and other services rendered. Even with the terminals, I have shown in reply to Question 53 that there is a loss of Rs. 107-4-0 per train.

Mr. Burbidge.—I cannot say how often dredging is done and I do not know who decides when it is to be done.

(Mr. Stuart Williams.—I may explain that the Port Commissioners are not responsible for the depth of the water at the dépôt: we only dredge there occasionally when we are asked to do so. From July to October, there are big freshets which scour out everything, but during the months from January to May silting goes on and then it is very difficult to keep everyone satisfied.)

Mr. Burbidge.—I suppose then that, when our engineers think dredging to be necessary, they ask the Port Commissioners to do the work. It is only at low tides that the shoots cannot be used. Generally speaking they can be used for 6 hours a day, but only one boat could come alongside the shoot.

(xxv) Prevention of pilferage.

66. Pilferage from Wagons.—(To Mr. Banerjee.)—Mr. Burbidge.—We have appointed a Watch and Ward Superintendent to deal with pilferage and hope to get very much better results. I put in a list of proposals by the Watch and Ward Superintendent for walling and fencing of yards.

Proposals of Watch and Ward Superintendent.

Fencing	Howrah.
Fencing	Bandel Junction (Boundary wall).
Fencing	Gya Station and the Marshalling Yard (Boundary wall).
Fencing	Cawnpore.
Fencing	Ghaziabad.
Fencing	Bhadreswar

Fencing	Bamangachi.
Wall	Sheoraphuli.
Roofing	New Transhipment platform at Moghalserai.
Wall	Behea.
Wall (crossing)	Near goods shed at Behea.
Boundary wall	Asansol.
Fencing	Tundla.

Mr. Robertson.—The proposed legislation is, I think, based on a Madras Act: the idea is that a man in possession of coal would be liable to have to explain where he got it from. The East Indian Railway approached the Bengal Chamber and got their support. If a man is found coming out of the yard with a basket of coal or anything else he will have to prove that he got it honestly.

Mr. Burbidge.—We are building a wall round the Asansol yard: it is not yet finished.

Mr. Robertson.—We have separated the goods shed at Howrah from the coal depôt by a corrugated iron fence.

(*To Mr. Legge.*)—We are improving the class of chowkidar. We have been recruiting entirely new men and, I believe, have got rid of the whole of the old chowkidari force: they found that the opportunities for loot were more than they could resist. The chowkidari force now is entirely separated from the rest of our staff.

(xxvi) *General recommendations.*

67. Suggestions for quickening coal transport and stimulating export of coal.—*Mr. Burbidge.*—As regards rakes we do not endeavour to keep the coal wagons for particular steamers together. We have had cases where rakes were split up, but the existing orders are that they should run as rakes. What I meant in the printed answer was that for export purposes small loadings should be eliminated: collieries should load by fifties or sixties, not ten wagons from one colliery and fifteen from another, etc. I am not blaming the collieries for this: the managing agents split up the orders.

(*To Mr. Bray.*)—We have not worked out a figure, such as the 3·4 days for wagons, for the time which it takes for a rake to get down to the Docks. We simply took all the wagons and did not get different figures for rakes separately. It should be within two days.

Mr. Robertson.—We are going to pay more attention to this point.

Mr. Burbidge.—As regards the suggestion by the Agent of the Bengal Nagpur Railway that wagons might be left standing at the Kidderpore docks for two or three days with coal for export, we should certainly run short of empties.

Mr. Robertson.—But I am certain that this would not be necessary and that the coal can be brought down in time. I think that rakes would in the ordinary course get down more quickly than would wagons which have to be collected. We could not, I think, undertake to collect wagons for a ship unless they were in rakes, (*To Mr. Whitworth*) or unless they were loaded at collieries very close together.

(*To Mr. Banerjee.*)—*Mr. Burbidge.*—The Bally bridge will connect at Dum Dum Junction. We shall not have the same difficulties there as we have now on the Bandel-Naihati section because there will be a flying junction at Dum Dum.

70. Naihati Docks Section.—(*To Mr. Legge.*)—*Mr. Robertson.*—As regards delays on the Naihati-Bandel section, which the Eastern Bengal Railway ascribe to the East Indian Railway's failure to clear loads from the Eastern Bengal Railway, we have no trouble now because the working of the Naihati section has been revised. The Eastern Bengal Railway ascribed the trouble

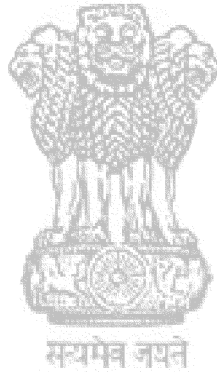
to our failure to clear empty loads and they were sending back the shuttles light. Now, after a meeting of officers in mid-December, we have cleared the matter up.

Train engines are not going through to Naihati and we still shuttle. The Loco. Department protested against the proposal because of the long hours on duty for engine staff coming down from Asansol and Ondal: there was also the difficulty about the engines being too heavy for the bridge. Co-operation between the East Indian Railway and the Eastern Bengal Railway is improving. There is now close co-operation.

(xxvii) *Coke.*

68. **Coke.**—(To Mr. Banerjee.)—Mr. Bond.—The reason why the charge for coke works out higher than for coal is due to the fact that coke is lighter and bulky. It should also not be forgotten that coke is more valuable than coal, especially “hard coke.”

Mr. Robertson.—Traffic is charged what it can bear.



G. L. COLVIN, Esq., C.B., C.M.G., D.S.O., Agent, East Indian Railway.

(Oral evidence—the 28th January 1925.)

(i) Staff.

1. Organisation of staff for coal traffic.—We prefer to have our Coal Manager in Calcutta rather than on the coalfields like the Bengal-Nagpur Railway because the actual operating work is under the Divisional Superintendent at Asansol and the work of the Coal Manager is largely liaison with the coal trade and general administrative work which can be done best in Calcutta.

(ii) General questions of wagon supply.

2. Total amount of coal transported.—Since the wagon-pooling system was introduced we have generally enough wagons, especially since the last eighteen months. It is not only the East Indian Railway wagons that affect the question, but the wagons of all the railways in India, now that there is a common pool. So lack of capacity has been the worst trouble although during the last six or seven months we have been practically meeting all demands in full.

(vi) Weighment, marshalling and despatch of wagons.

14. Weighment, marshalling and despatch of wagons.—As regards the question whether it would be advisable to put in weighbridges at the large collieries, I would ask you in return how is weighment to be done? Will the collieries hand-shunt the wagons? So far as operating goes, the suggestion that the big collieries should have their own weighbridges and their own locos as the Chief Mining Engineer has in his Kargali colliery and that the railways in return should reduce their terminals is in my opinion quite a helpful one. Anything which gets over the difficulty of over-loading wagons would be a help to us. At the same time economically the scheme would have the disadvantage that there would not be enough work for a weighbridge clerk in one colliery: the biggest colliery would only despatch 50 or 60 wagons in a day and the weighment of these would not occupy a man's time fully. It is worth considering whether this waste of staff would be compensated for by other advantages. To work a man for only $\frac{1}{3}$ th of a day would certainly not be economical.

I fancy that we should have to have our railway staff to work the weighbridges unless there was some arrangement for accepting colliery weights: and this would undoubtedly cost more. Certainly the pilot guard could not work the weighbridges in colliery sidings; that would choke the whole section. The great advantage offered by the whole scheme is that the pilot will not be delayed.

We should have no objection if collieries liked to take the trouble to weigh empty wagons as well as full wagons as it is said they do in England. But we should still charge, probably, on our own tares.

We check the wagon-tare every time that the wagon goes into shop. It must go into the shop every two years and it may go in more often. Our trouble is that we get wagons on our system from every railway in India and we cannot guarantee the tare of wagons from other lines. It would not be possible to hold up wagons of which the tare is suspected to be wrong, once the wagon was loaded: it would be very difficult to hold up the work and empty the wagon in order to check the tare. All that could be done would be to make a note of the number of the wagon and arrange for it to be checked when next it went into the shops and that might be a matter of months.

(ix) Overloading and load lines.

19 and 20. **Overloading at collieries.**—As regards the suggestion that one type of open wagon should be standardised on the East Indian Railway, I should say that the open wagons are practically standardised already. The Indian Railway Conference Association's wagon is a standard type and has been adopted by the E. I. Railway. There must necessarily be four or five different standard sizes because some of them are needed for military and other purposes. As to the idea that the wagon should be such that it can be loaded flush without overloading, the new big type of I. R. C. A. wagon needs practically no piling of coal at all.

I can give no suggestions for avoiding overloading beyond those included in my printed note. We rather conclude that the load line is a snare and a delusion. I may mention that I asked a representative of one of the big home firms to see if they could design a wagon which would record its own load, but I presume they found the problem insoluble because I never heard further from him on the subject.

(xi) Check on delays in transit.

25. **Prevention of delays to wagons.**—As regards the complaint of the collieries that they never see a gazetted officer visiting their sidings and that more inspection of the work of the subordinate railway officials should be done by gazetted officers, we have an out-door assistant for this sort of work at Asansol, but I do not think that this is the correct way to solve the difficulty. An officer cannot cover much ground by carrying out actual personal inspections: the best check that he can exercise is the general check on results which he can make in his office from reports, returns and statistics received. If he goes out personally he can only visit a comparatively few yards and it is very rarely that if he tries to interfere in the work he can do much good.

As to the monthly meetings of the railway officials and colliery managers on the collieries, I was away when they used to be held and have no personal knowledge of them. I am not sure that it would be any use to re-introduce them: either nothing would come up for discussion or far too much. I can foresee that the time of my officers would be wasted in preparing voluminous written statements and figures to satisfy the Committee. You would have no idea of the amount of work of this kind that is involved in meeting requests for information from my Advisory Committee. I very much doubt the necessity for these suggested monthly meetings. The colliery managers, as it is, are always meeting the railway officials either socially or otherwise and it is not my experience that they are ever backward in voicing their complaints on any occasion. I do not like management by a Committee. We might try the meetings again perhaps, though I am very doubtful of their utility.

(xiii) Wagon supply.

28. **Supply of open wagons only to particular collieries.**—As regards paragraph (b) of our written reply, if anybody does not get open wagons in spite of the definite orders which we have issued, we shall take up the matter very strongly if he will only report to us.

(xiv) Prepayment of freight.

33. **Objection to return to the "freight to pay" system.**—Even if the Bengal-Nagpur Railway have no objection other railways have. The movement started from other railways which had suffered from not obtaining payment of their freight: it first started with the North Western Railway and then the Great Indian Peninsula Railway came in. We are interested to some extent as regards our up-country stations. I do not agree that the system is hard on collieries: why should they not make the consumers' pay? However, this is a matter to be considered by the Railway Con-

ference Association, because it affects all railways: and it also concerns the Railway Board. I cannot go as far as the Bengal-Nagpur Railway in this matter. The suggestion that it might be possible to discriminate between short distance and long distance traffic as regards pre-payment of freight might be put up for the consideration of the Railway Conference Association.

(xv) *Sidings.*

34. **Applications for sidings.**—I cannot say whether two or three sidings are given to certain collieries without their furnishing any additional traffic unless I know the details and have time to go into the matter.

As regards the alleged delay in sanctioning sidings and the procedure for minimising any such delays, I suppose there are two main reasons why sanctions are delayed:

- (1) the applicant cannot convince us that the siding will be remunerative; or
- (2) we have not got sufficient second-hand rails: this latter cause applied chiefly during, and for a period after, the war when no new rails were available, but things are now getting better in this respect.

I admit that there have been delays in sanctioning sidings but they are chiefly the result of these two causes. I do not think that it would be any remedy to say that firms might put in sidings at their own expense on the understanding that if the amount of traffic justified it the railway would take them over as aided sidings and repay a proportion of the cost: as a matter of fact they can do this now, but very few applications are received from people who are willing to put down the money for private sidings.

The minimum amount of traffic that would justify the installation of a siding depends on the cost of the siding. We like to see a return of 7 or 8 per cent.

(xvi) *Preferential wagon supply for export and bunker coal.*

37. **Preferential wagon supply for export and bunker coal.**—A preferential wagon supply for export-coal would affect industries to some extent. You have only a certain number of wagons, and at times of shortage the more you divert to one thing the less there are for another.

Even though most of the coal exported by sea goes to Bombay, yet one must consider the result of encouraging this traffic from the point of view of the industries in the middle of India: the Upper India Chamber of Commerce, for instance, might have something to say about it. Of course the whole question falls to the ground if we are able to continue arranging for a good supply of wagons.

The practical measures possible for insuring punctual arrival of export-coal at the docks would be our general proposals for new lines and yards and in particular for the down yard at Asansol and the avoiding line there: there is also the Bally bridge. We are now working tight and a very small thing, an accident for instance, is sufficient to throw us out badly. We have no margin against eventualities.

The Bally bridge scheme is up before the Railway Board. It is a proposal for a double-track bridge: the main lines of it will be apparent from the plan which has been given to the Committee. It will have easy grades of one in 500 and no bank pilot engine will be needed. The junction at Dum Dum will be a flying junction, *i.e.*, will pass over the E. B. S. Railway main line.

I should have no objection at all to the suggestion of the Port Commissioners that we should exchange a Transportation Officer with them, keeping our man a month or two at the docks and then having theirs for a month or two on the coalfields. I think it would be quite a sound idea

and might do good. A senior assistant of about thirty years old would be suitable. I admit that the average time of four days to the dockyards from the colliery siding is unsatisfactory. It is with a view to its improvement that we are going in for extra facilities. We have had the matter in hand for a long time and crores are being spent or are proposed on the downwards traffic facilities from Dhanbad to the docks. When all these facilities are ready it will be a great help.

(xvii) *Coal Transportation Officer.*

40 and 41. **Value of Coal Transportation Officer to railway.**—To the suggestion that we might keep three classes of preferential supply, for loco., export coal and works of public utility, and distribute all other wagons *pro rata* to the collieries as agreed to in pre-war times by the coal trade, our attitude is that for distribution of wagons we work under the orders of the Coal Transportation Officer and if he asked us to work in a certain way we shall fall into line.

To say whether the Coal Transportation Officer would be needed if such a scheme were introduced is not easy: who would define works of public utility? If there were a list of these and no industries or mills could claim preferential treatment, I do not imagine that, granted these conditions, the Coal Transportation Officer would be necessary.

I am not prepared to say whether if the Coal Transportation Officer were abolished, the railway would distribute *pro rata* as in pre-war times. It is a hypothetical question which I cannot answer off-hand. If occasion arises for it to be answered, we should first have to consult the Indian Mining Association and the Indian Mining Federation.

(xviii) *Railway freights and terminal charges.*

49. **Rates and terminals for export and bunker coal sent to Calcutta.**—As regards giving seasonal rates a trial and seeing by actual test whether they would not reduce the pressure during the busy season, I have nothing to add to what I said in my written reply. We went very fully into this matter when it was raised last year and we reported on it to the Railway Board.

Last year, I may say, we had practically no slack season in contrast to the year before when the slack season was very marked. The real reason why last year despatches were even is that the collieries started the monsoon with heavy stocks. When there are heavy stocks, despatches during the rains will be heavy and when the stocks are small despatches will be low: it is a matter apparently altogether independent of prices. The question of wagons does not come in at all: during the rains you can assume that wagons will be available. I do not think that any economic law governs the amount of despatches during the rains: it is entirely a question of how much coal is in hand. In 1922 after the strike on our system stocks had undoubtedly accumulated before the rains broke and there were then heavy despatches during the rains. In 1923, I know of no special reason why the demand fell but despatches were very much smaller. Presumably this was because we had given heavy despatches in the previous part of the year and the collieries had no stocks. Capacity would come in as well as wagons in regard to seasonal rates, but generally we have a little spare capacity at that time because the general goods traffic falls off during these three months.

54. **Possibility of reducing charges on coal.**—I hope that the tendency shown by our working expenses to come down is likely to continue but it depends on circumstances. I see from to-day's newspaper that the Assembly is asking for an enquiry as to the payment of subordinates on the railway staff. If this enquiry is made and if it results in any large concessions to the staff, I expect that expenses will go up.

57. Rates and terminals for loco. coal.—As regards the bearing of the recommendation of the Inchcape Committee, that railways should run on a commercial basis, upon the grant of preferential rates to foreign loco. coal, I can only refer the Committee to the Railway Board.

(xxiii) The rebate on coal and its effects.

60. Effects of export coal rebate.—As regards the suggestion that a rebate should be granted on bunker coal as well as on export coal, I would remark that the special reason for the rebate on export coal was that we were told that it would help the Indian coal trade to capture foreign markets: a rebate on bunker coal would in no way help in this respect. I have no objection in looking into this question, but it is up to the coal-firms to put up a case, as they did before in regard to export-coal, showing that the rebate would pay us,—not that it has paid us in my opinion as regards export-coal.

61. Payment of rebates.—I am quite prepared to consider the suggestion put forward by the Bengal-Nagpur Railway that the collecting railway should pay the rebate and debit the other railway with a specified percentage of its earnings in order to expedite the payment of rebate. I cannot commit myself, but the proposal on the face of it seems to be reasonable.

To the suggestion by Mr. Banerjee that the rebate might be given on the quantity actually invoiced by the railway and not on the quantity shown in the bill-of-lading, I should point out that the rebate is a rebate on 'export' coal. We have recently had instances of coal being re-booked from the Kidderpore docks and if the rebate had been granted on railway weights it would have been given in those cases on coal that never left the country. The bill-of-lading is the only authority on which our Chief Auditor could pay rebates.

(xxiv) The working of the coal depôts at Howrah and Shalimar.

64. Position as to the coal depôts.—The engineering staff of my railway are responsible for deciding what dredging should be done at the jetties: then we ask the Port Commissioners to do the work. I can give no information as to the amount of dredging done. We should be prepared to leave the decision as to the necessity for dredging to the Port Commissioners who are experts on such points. We should be prepared to be guided by their expert opinion.

(Mr. Stuart Williams.—The Port Commissioners would have to be paid for the work, of course. My impression is that dredging has not been done lately. The difficulty is that at the time when dredging is needed there are great demands on our plant.)

(xxviii) Coal traffic viâ Naihati.

69 and 70. Co-operation between the East Indian and the Eastern Bengal Railways.—As regards the co-operation between the East Indian Railway and the Eastern Bengal Railway, I fancy what the Agent of the Eastern Bengal Railway means is that we ought to run our trains into Naihati without first changing engines at Bandel. I hope to be able to work up to this but at present the hours on the road are so long that it would be a cruelty to the drivers to ask them to take the trains further. There is no proposal before us for strengthening the Jubilee bridge and if the Bally bridge project comes to anything the strengthening of the Jubilee bridge will not perhaps be necessary. My own view is that it would be impossible to strengthen the Jubilee bridge under traffic: it is too old and the construction of it is too awkward.

We do not marshall trains for "viâ Naihati" but hand over the wagons for marshalling to the Eastern Bengal Railway who now have a big yard at Naihati where they can do it. This saves delays and is a question of convenience. Suppose that we have 25 wagons for "Up from Naihati"

and 25 wagons for "Down from Naihati," it saves time to send the whole 50 down to Naihati on the same train instead of keeping them in our yards until we can make up two full trains each of 50 wagons for the two directions. The Eastern Bengal Railway also have traffic for those two directions and with these in addition to our wagons they can make up full trains.

Recommendations of the Coal Conference of 1912.

We have not constructed the yard at Bandel for marshalling wagons which was suggested by the Conference. It is lucky we did not do so because a lot of traffic which was then expected to go into Bandel now goes direct from Burdwan *via* the Burdwan-Howrah chord, and with the Bally bridge in existence even more traffic will avoid Bandel.

Marshalling of trains which will cross the Bally bridge will be done chiefly in the weighment yards, because the traffic will mostly be coal for the docks. The Bally bridge connection will take off from the Burdwan-Howrah chord and most of the traffic for it will leave the main line at Burdwan *via* the chord. I think that it is a seven miles shorter lead from the chord line than from the main line.

As regards the recommendation of the Conference that there should be an additional line between Burdwan and Bandel there is now no necessity for it because the Burdwan-Howrah chord has taken its place. Similarly, as to their suggestion that the line between Asansol and Burdwan should be quadrupled we have a quadruple line only between Khana and Ondal. There is a third line between Asansol and Ondal now. We recently considered the question whether we should increase the number of lines between Ondal and Khana to three or four, and it was the opinion of our expert officers that with the quickening of the passage of trains over this stretch of line largely as a result of improved facilities at Burdwan and elsewhere the necessity for additional lines would disappear.

The recommendation of the Conference for a sorting yard at Liloah was not carried out. We found that the Liloah yard worked perfectly smoothly and traffic goes through it without congestion and without trouble. The returns from this yard are some of the best on the whole system.

Abolition of rakes.—Rakes were abolished in 1916, but undoubtedly conditions have changed thoroughly since then and the reasons which led to their being abolished then might not apply at all now.

General conclusions.—I agree that railway facilities are still not all that could be desired, although temporarily they are good enough, but we are working to improve them and are increasing our facilities enormously. As regards the statement in our reply to Question 2 which shows that we handled more coal in 1924 than ever before the reason is that the improvements are coming into bearing. To show what an improvement there has been I would refer to our average for wagons placed on the coalfields, during the last week. It was for five days 2,500 and the best day showed 2,610; that is not our record which is 2,691. The figures were as follows:

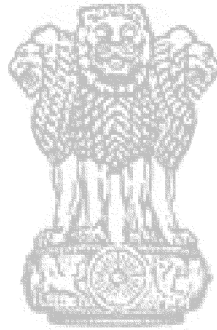
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Although there was a falling off on these last two days we were none the less supplying "full on indent."

It is a fact that two depôts had to go slow on one or two of these days because of their limited capacity although the others were working

full on indent. In this connection I would refer to the answer to Question 17, though last week we were once or twice unable to give "full on indent" at Pathardihi and Jherriah depots owing to the limitation of their capacity, this only happens occasionally. We sometimes get in a very large number of indents for wagons from sidings in a particular depôt, not always of course, and it would be impossible to arrange our depôts so as to be able always on any one day to handle all the wagons that the collieries wish to put through them. I can give figures to show the relative demands made on the different depôts, in terms of indents made.

As regards the work being done on these depôts, Pathardihi is finished, but we are still hoping to improve the working of the pilots. Jherriah is not yet complete. Katras is now complete.



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(iv) Great Indian Peninsula Railway Company.

WRITTEN STATEMENT.

1. **Coal traffic from different coal fields.**—The figures are shown in Appendix A.

2. **Number of wagons indented and supplied.**—The figures are shown in Appendix B.

3. **Overloading.**—Wagons are weighed at Junnerdeo and at Ballarshah. Only open wagons are supplied to Chugus and so far as possible to road side stations. We have no complaints of overloading and no penalty is levied. Weighbridges are being installed at Amla and Wardha at which all wagons not weighed at Junnerdeo and Ballarshah will be weighed.

4. **Load line.**—The load line for coal marked on covered wagons is based on a specific gravity of 42 cubic feet. All covered wagons are marked with this load line. The load line can only be taken as a general guide.

5. **Open wagons.**—A load line is marked on a few open wagons that are capable of taking more coal than the carrying capacity. G. I. P. open wagons not marked with a load line can be loaded flush with the top.

6. **Suggested substitute for load line.**—It would not be satisfactory for each colliery to mark its own load line in chalk on the wagon before it commenced loading. Wagons are not of a standard uniform size, and it is most improbable that a colliery could arrange to calculate the correct position of the load line for each type of wagon before it was loaded.

7. **Freight prepayment system.**—(a) The freight prepayment system is in force over this railway for coal. Consignees, on occasion, failed to take delivery of coal consigned "to pay" and it sometimes happened that when the coal was auctioned the price obtained was less than the freight due to the Company. It is believed that consumers were able to get cheap coal by forming a ring to buy in coal auctioned as "not claimed," the same ring having been responsible for ordering the coal to be despatched "bearing." We should object to the alteration of the present rule.

(b) The abolition of the prepayment system for coal on other railways would be objected to on the same grounds.

8. **Demurrage at the docks.**—Wagons are interchanged with the Bombay Port Trust Railway and that railway is allowed free time of 24 hours (with an addition of 12 hours in the case of re-loading) before hire charges are levied. Hire charges are at the rate of 1 anna 8 pies per four-wheeler (bogie wagons being reckoned as two four-wheelers) calculated on each individual wagon. The recovery of demurrage by the B. P. T. Railway from the public is at the discretion of the B. P. T. Railway, and the amount collected belongs to the B. P. T. Railway, except that should the amount collected in any one month exceed the amount of hire payable to the G. I. P. Railway for that month, such excess would be credited to the G. I. P. Railway.

9. **Charges on coal from collieries on G. I. P. Railway.**—A statement is attached as Appendix C.

10. **Charges on coal from collieries on the E. I. R. and B. N. R.**—A statement is attached as Appendix D.

11. **Charges on coal from Bombay up-country.**—A statement is attached as Appendix E.

12. **Variations in charges levied on coal.**—(a) Prior to 1st November 1906 the scale for public coal at owner's risk was as under:—

	Pie per md. per mile.
For all distances up to 400 miles inclusive	0'15
For distances in excess of 400 miles	0'10

This scale was chargeable on the total distance from the colliery station to the destination station, railways concerned sharing the total rate in mileage proportion.

(b) From 1st November 1906, at the instance of the Railway Board, the following lower scale was introduced from the Bengal collieries only with a view to encourage movement to long distances and thereby assist industries in the Punjab, Gujarat and Bombay:—

	Pie per md. per mile.
From 1 to 75 miles	0.14
Plus 76 to 200 miles	0.12
Plus 201 to 500 miles	0.06
Plus 501 and over	0.05

From the same date the G. I. P. Railway introduced a ghat charge of annas 8 per ton for coal for stations below the ghats.

(c) From 1st June 1919 the scale shown in paragraph (a) was cancelled and the Bengal coal scale shown in the preceding clause was made applicable on the G. I. P. for all coal traffic.

In addition the following charge was levied by the G. I. P.:—

	Annas per ton.
Terminal charge at forwarding station	2

(d) From the 1st April 1920 the G. I. P., East Indian, Bengal Nagpur, Bengal and North Western, Oudh and Rohilkhand, North Western, Bombay, Baroda and Central India, Jodhpur-Bikaner, Madras and Southern Mahratta (north-east line) introduced a slightly enhanced scale of rates as follows:—

	Pie per md. per mile.
From 1 to 100 miles	0.15
Plus 101 to 200 miles	0.125
Plus 201 to 700 miles	0.06
Plus 701 and over	0.05

In addition to the above, the following charges were levied by the G. I. P. Railway:—

	Annas per ton.
Ghat charge	8
Terminal charge at forwarding station	2

(e) From 1st November 1920, the terminal charge of 2 annas was imposed at receiving station also.

(f) From 1st April 1921, the scale was further revised, as under, over the G. I. P. and other railways mentioned in clause (d):—

	Pie per md. per mile.
For the first and up to 200 miles	0.15
For extra distances above 200 miles not exceeding 300 miles to be added to the charge for 200 miles	0.13
For extra distances above 300 miles not exceeding 700 miles to be added to the charge for 300 miles	0.07
For extra distances above 700 miles to be added to the charge for 700 miles	0.06

The ghat charge was made applicable in both directions.

(g) From 1st October 1921 the ghat charge was increased to Re. 1 per ton and the terminal charge at both ends to 4 annas per ton.

(h) From 1st April 1922 the Railway Board sanctioned a general increase in goods rates, and from the same date the scale of rates for coal was again revised as under over the G. I. P. and other railways mentioned in clause (d).

For distances 400 miles and under:—

	Pie per md. per mile.
For the first and up to 200 miles	0 165
For extra distances above 200 miles not exceeding 400 miles to be added to the charge for 200 miles	0 130

Rates for distances for over 400 miles remained as before.

(i) The increased charges made from time to time were on account of the increased working expenses of the railways concerned. Though the present scale is higher than that which was in force on 1st November 1906, it has not advanced in anything approaching the same proportion as the working expenses.

(j) On the 1st August 1923, station-to-station rates were quoted for coal from collieries situated on the G. I. P. at 10 per cent. above the minimum authorised by the Railway Board, which is as follows:—

	Pie per md. per mile.
From 1 to 300 miles	0 10
Plus 301 to 500 miles	0 066
Plus 501 and above	0 05

These rates only apply to distances over 200 miles.

(k) This reduction was rendered necessary by the competition of Bengal coal in the areas served by the G. I. P. collieries. The demand for G. I. P. coal had seriously diminished and it was necessary to take measures to enable it to compete against a coal which has 30 per cent. more calorific value. Not only was action necessary on account of the position at the time but to enable the G. I. P. coal to extend its range of demand because of the extension of output in the Central Provinces.

13. **Existing rates.**—We have no criticism to offer on the present scale of rates from Bengal coalfields to Bombay.

14. **Possibility of reducing charges.**—This Company is not in favour of any reduction in rates for coal: they are already very low. To take the question of the rate to Bombay first; the rate for coal from the Bengal collieries is Rs. 15-6-0 made up as follows:—

Viâ Nagpur.

	Rs. A. P.
B. N. Railway proportion.	
2'31 pies per ton per mile × 631 miles	7 9 8
Terminal charge	0 4 0
G. I. P. proportion.	
2'31 pies per ton per mile × 520 miles	6 4 4
Terminal charge	0 4 0
Ghat charge	1 0 0
TOTAL	<u>15 6 0</u>

Via Jubbulpore.

	Rs.	A.	P.
E. I. Railway proportion.			
2'25 pies per ton per mile × 566 miles	6	10	4
Terminal charge	0	4	0
G. I. P. proportion.			
2'25 pies per ton per mile × 616 miles	7	3	8
Terminal charge	0	4	0
Ghat charge	1	0	0
TOTAL	15	6	0

Including the terminal and ghat charges the charge over the G. I. P. per ton per mile *via* Nagpur is pies 2'77 and *via* Jubbulpore pies 2'71, whilst the average cost of hauling one ton one mile over the G. I. P. for the year ending 31st March 1924 was pies 4'57. Coal is hauled at less than the average cost on account of its being carried in full wagon loads for long leads and because no claims are paid on its account, though these advantages are discounted by the increased light mileage incurred in the carriage of coal, but there is a very big margin between 4'57 and 2'77 and an extremely strong case to present against any reduction in the rate so far as the G. I. P. is concerned.

It is not possible to state the average amount per ton mile received for the carriage of coal over the G. I. P. but the following example is of interest:—

Jharia to Harda *via* Jubbulpore.

	Rs.	A.	P.
E. I. Railway proportion.			
2'66 pies per ton per mile × 566 miles	7	13	7
Terminal charge	0	4	0
which is equivalent to 2'75 pies per ton per mile including terminal.			
G. I. P. proportion.			
2'66 pies per ton per mile × 200 miles	2	12	5
Terminal charge	0	4	0

Including the terminal the rate per ton per mile over the G. I. P. is 2'91 pies. There is no doubt that the majority of coal from the Bengal coalfields to and *via* the G. I. P. travels more than 200 miles over that line and the greater the distance the smaller the receipts per ton per mile.

A further reason against reducing the rates for coal from the Bengal coal fields is that any reduction would necessitate a further reduction in our rates from the collieries situated on the G. I. P.

15. **Suggested rebate on coal by all rail route to Bombay.**—We are not in favour of a reduction in the rate for reasons given in the preceding paragraph.

16. **Rates for loco. coal.**—The scale of rates for locomotive coal was the same as for the public up to 1st April 1920, from which date rates for public coal only were enhanced. The scale for locomotive coal was increased from 1st December 1922, as under:—

	Pie per md. per mile.
For all distances up to 200 miles inclusive	0'15
Plus for any distance in excess of 200 miles up to 500 miles inclusive	0'07
Plus for any distance in excess of 500 miles	0'06

In addition to this a terminal charge of 2 annas per ton at forwarding end was levied.

It is a generally recognised principle that material owned by railways should be carried at favourable rates. Were the present rates increased an increase in railway charges for public traffic would be necessitated to cover the advance in working expenses.

17. Terminal charges.—The justification for levying terminal charges is the services rendered in return for them. These are marshalling of wagons, weighing, accommodation provided at stations.

18. Coal depôts in Bombay.—We have no coal depôts in Bombay in which coal is stacked to be carted away by the consignees as required.

19. Pilferage.—The best means of reducing the pilferage of coal are:—

- (a) improvement of the Watch and Ward staff;
- (b) improvement in lighting of yards;
- (c) legislation to make it easier to convict those who steal coal.

The Railway Police Committee of 1921 recommended that an Act be passed by the Indian Legislature authorising Local Governments to declare that provisions such as exist in the Police Acts in force in the Presidency towns and the Howrah Offences Act, 1857, should apply to such districts within their jurisdiction as they might think fit. These Acts provide that whoever has in his possession anything which there is reason to believe has been stolen or fraudulently obtained, shall if he fails to account for such possession to the satisfaction of the Magistrate be liable to fine or imprisonment. It is understood that it has been decided that the question of legislation on these lines should be left to Provincial Legislatures. If they would take action a great amount of robbery of coal and other goods would be stopped.

20. General suggestions.—The most effective way of speeding up the transport of coal would be to work complete coal trains operated with the vacuum brake. Unfortunately the neighbouring lines have not attached the same importance to the use of the vacuum as has the G. I. P. Railway and there is a substantial delay in reconditioning the brake gear on wagons made over to the G. I. P. Railway. For 2½ years the policy of this line has been to concentrate on forming through loads over the longest possible distances and naturally coal has had its full share in resultant speeding up of movement. Provided that the decision of the broad gauge Railways to make the use of the vacuum brake universal is carried out in practice in the next few years there will be a resultant speeding up in all traffic owing to greater control of the load and saving of time at interchange points.

21. Consumption of coal and oil fuel on the G. I. P.—A statement is attached as Appendix F.

22. Electrification of the G. I. P. Railway.—The present intention is to electrify the line as far as Poona and Igatpuri. The result would be to reduce the expenditure on coal by about 250,000 tons per annum.

APPENDIX A.

(Fide Question 1.)

Statement showing total amount of coal traffic (carried for the public and foreign railways and revenue) booked over this railway (a) from coalfields on the E. I. and B. N. Railway system separately, (b) from the coalfields on this railway's own system, (c) from the coalfields on H. E. H. the N. G. S. Railway, and (d) from Bombay up-country for the period from 1st January 1912 to 31st March 1924.

Period.	(a) from coalfields on		(b) from coalfields on this Railway system.	(c) from coalfields on the N. G. S. Railway.	(d) from Bombay.*	Revenue coal. †		Total.
	E. I. Ry.	B. N. Ry.				Tons.	Tons.	
Year ending—								
31st December 1912	468,051	282,162	25,176	74,541	16,154	949,975	1,866,059	
Quarter ending—								
31st March 1913	140,266	60,891	6,541	19,140	3,878	223,519	451,315	
Year ending—								
31st March 1914	504,021	267,879	17,479	90,966	10,554	964,650	1,855,549	
31st March 1915	576,544	357,370	26,374	40,612	6,073	930,560	1,937,863	
31st March 1916	903,944	648,264	35,369	36,840	3,340	1,118,707	2,746,664	
31st March 1917	1,319,873	623,293	61,678	50,725	6,427	1,316,106	3,378,102	
31st March 1918	946,950	714,447	41,372	59,710	10,858	1,426,846	3,290,183	
31st March 1919	1,299,819	570,001	121,559	64,795	12,314	1,521,156	3,589,544	
31st March 1920	1,255,786	444,915	124,293	71,781	7,699	1,399,456	3,303,906	
31st March 1921	965,969	290,755	279,563	56,085	25,437	1,276,024	2,898,833	
31st March 1922	403,559	455,952	402,327	43,204	43,110	1,303,639	3,251,791	
31st March 1923	430,675	374,325	336,316	39,612	33,522	1,316,982	2,531,432	
31st March 1924	440,417	178,142	282,815	13,971	27,328	1,048,691	1,990,464	

* The principal stations to which coal is despatched from Bombay are those serving the Bombay mills area, such as Kurda, Sion and Kalyan. There are also despatches to Poona and Sholapur.

† Detailed information for revenue coal is not readily available.

The figures shown against each year are the purchases in those years. The actual consumption of coal and oil; by locomotives each year is shown on the further statement attached, Appendix F.

APPENDIX B.

(Vide Question 2.)

Statement showing the number of wagons indented for and supplied to the collieries located on the G. I. P. Railway System for each calendar year from 1914 to 1924 inclusive.

Year.	Indented for.	Supplied.	Year.	Indented for.	Supplied.	REMARKS.
1914.						
1st half	5,583	3,948	1920.	9,550	8,513	In 1914 and 1915, Balharshah and Gotitoria Collieries were opened.
2nd "	5,640	3,440				
1915.						
1st half	5,919	3,851	1921.	20,283	14,227	In February 1916, Panch Valley Colliery was opened.
2nd "	5,393	2,727				
1916.						
1st half	6,915	4,268	1922.	18,199	15,593	In January 1920, Ghugus Colliery was opened.
2nd "	6,713	5,319				
1917.						
1st half	9,474	8,971	1923.	9,201	8,513	
2nd "	7,901	7,392				
1918.						
1st half	12,639	11,211	1924.	12,988	11,430	
2nd "	11,395	10,646				
1919.						
1st half	11,363	10,144		12,958	13,188	
2nd "	9,343	8,619				

APPENDIX F.

RATES FOR COAL FROM BOMBAY.

(Vide Question 11.)

1. In the year 1912 the following scale was charged both for public and railway use:—

	Pie per md. per mile.
For the first and up to 400 miles	0'15
Plus for extra distances	0'10
The rates per ton at the above basis for 100 to 1,000 miles work out as shown below:—	

Miles.	Per ton.			Pies per ton per mile.
	Rs.	A.	P.	
100	2	2	0	4'08
200	4	4	0	4'08
300	6	6	0	4'08
400	8	8	0	4'08
500	9	15	0	3'82
600	11	6	0	3'64
700	13	12	0	3'50
800	14	3	0	3'41
900	15	10	0	3'33
1,000	17	0	0	3'26

There were no terminals.

2. From 1st June 1919 the above scale was cancelled and the Bengal coal scale was applied. The Bengal coal scale was as follows:—

	Pie per md. per mile.
From 1 to 75 miles	14
Plus 76 to 200 miles	12
Plus 201 to 500 miles	06
Plus 501 and over	05

The rates per ton at the above basis for 100 to 1,000 miles work out as shown below:—

Miles.	Per ton.			Pies per ton per mile.
	Rs.	A.	P.	
100	2	0	0	3'84
200	3	11	0	3'54
300	4	9	0	2'92
400	5	6	0	2'58
500	6	4	0	2'40
600	6	15	0	2'22
700	7	11	0	2'11
800	8	6	0	2'01
900	9	1	0	1'93
1,000	9	13	0	1'88

The following charge was levied in addition:—

Terminal charge of Re. 0-2-0 per ton at the forwarding station only.

3. From 1st April 1920 the scale for public coal was revised as under:—

	Pie per maund per mile.
From 1 to 100 miles	0.15
Plus 101 to 200 miles	0.125
Plus 201 to 700 miles	0.06
Plus 701 and over	0.05

At the above basis the rates per ton for 100 to 1,000 miles work out as under:—

Miles.	Per ton. Rs. A. P.	Pies per ton per mile.
100	2 2 0	4.08
200	4 0 0	3.84
300	4 13 0	3.08
400	5 11 0	2.73
500	6 8 0	2.50
600	7 6 0	2.36
700	8 4 0	2.26
800	8 15 0	2.15
900	9 10 0	2.05
1,000	10 6 0	1.99

In addition to the above rates the following charge was levied:—

	Per ton. Rs. A. P.
Terminal charge at forwarding end	0 2 0

From 1st November 1920 the following charges were levied:—

Terminal charge at forwarding end	0 2 0
Terminal charge at receiving end	0 2 0

4. From 1st April 1921 the scale for public coal was further revised as shown below:—

	Pie per md. per mile.
For the first and up to 200 miles	0.15
For distances above 200 miles not exceeding 300 miles to be added to the charge for 200 miles	0.13
For distances above 300 miles not exceeding 700 miles to be added to the charge for 300 miles	0.07
For distances above 700 miles to be added to the charge for 700 miles	0.06

At the above basis the rates per ton for 100 to 1,000 miles work out as under:—

Miles.	Per ton. Rs. A. P.	Pies per ton per mile.
100	2 2 0	4.08
200	4 4 0	4.08
300	6 2 0	3.92
400	7 1 0	3.39
500	8 1 0	3.10
600	9 1 0	2.90
700	10 1 0	2.76
800	10 15 0	2.63
900	11 12 0	2.51
1,000	12 10 0	2.42

In addition to the above rates the following charges were levied—

	Per ton.
	Rs. A. P.
Terminal charge at forwarding end	0 2 0
Ghat charge	0 8 0
Terminal charge at receiving end	0 2 0

From 1st October 1921 these extra charges were revised as follows:—

	Per ton.
	Rs. A. P.
Terminal charge at forwarding end	0 4 0
Ghat charge	1 0 0
Terminal charge at receiving end	0 4 0

5. With effect from 1st April 1922 the scale for public coal was again revised as under:—

	Pie per md. per mile.
For distances 400 miles and under:—	
For the first and up to 200 miles	0.165
For distances above 200 miles not exceeding 400 miles to be added to the charge for 200 miles	0.130
For distances above 400 miles:	
For the first and up to 200 miles	0.15
For distances above 200 miles not exceeding 300 miles to be added to the charge for 200 miles	0.13
For distances above 300 miles not exceeding 700 miles to be added to the charge for 300 miles	0.07
For distances above 700 miles to be added to the charge for 700 miles	0.06

The rates per ton at the above basis for 100 to 1,000 miles work out as shown below:—

Miles.	Per ton. Rs. A. P.	Pies per ton per mile.
100	2 7 0	4.68
200	4 11 0	4.50
300	6 8 0	4.16
400	7 1 0	3.39
500	8 1 0	3.10
600	9 1 0	2.90
700	10 1 0	2.76
800	10 15 0	2.63
900	11 12 0	2.51
1,000	12 10 0	2.42

The following extra charges were levied:—

	Per ton. Rs. A. P.
Terminal charge at forwarding end	0 4 0
Ghat charge	1 0 0
Terminal charge at receiving end	0 4 0

APPENDIX F.

Statement showing the figures of this Railway's own consumption of (1) coal and (2) oil fuel since the year 1912.

(Vide Question 21.)

Period.	Consumption on locomotives.	
	Coal.	Oil fuel.
	Tons.	Tons.
Year ending—		
31st December 1912	831,532	Nil
Quarter ending—		
31st March 1913	225,145	Nil
Year ending—		
31st March 1914	908,359	404
31st March 1915	867,134	57
31st March 1916	969,317	64
31st March 1917	1,096,992	1,239
31st March 1918	1,140,720	4,779
31st March 1919	1,159,930	6,200
31st March 1920	1,188,656	9,246
31st March 1921	1,156,731	14,658
31st March 1922	1,117,074	36,835
31st March 1923	1,016,554	53,047
31st March 1924	984,998	68,018

**R. McLEAN, Esq., Agent, Great Indian Peninsula Railway, and
D. S. BURN, Esq., Chief Traffic Manager, Great Indian
Peninsula Railway.**

ORAL EVIDENCE—FEBRUARY 4TH, 1925.

1. **Coal traffic from different coalfields.**—*Mr. McLean.*—The rapid increase in the amount of the coal carried on our own system during the last 6 or 7 years is due to the opening up of the Central Provinces coalfields.

Mr. Burn.—The reason why the amount carried on the Bengal-Nagpur Railway has gone down so considerably during the last 3 years is that the big purchases of South African coal in Bombay have affected Bengal coal.

Mr. McLean.—This has affected supplies coming over the Bengal-Nagpur Railway more than those coming over the East Indian Railway because the wagon supply is easier on the East Indian Railway than on the Bengal-Nagpur Railway. I think that my railway uses more coal from the East Indian Railway than from the Bengal-Nagpur.

Mr. Burn.—There is one matter to which I should like to draw the attention of the committee and that is the appreciable decrease on the latest figures for 1924 in the output of the coalfields on the Great Indian Peninsula. It increased up to 1922 and then came down again owing to the competition of the Bengal collieries in the area served by the Great Indian Peninsula.

Mr. McLean.—A further reason is that in 1922 when there was trouble on the Bengal coalfields, the Central Provinces coal had a very brisk market and people who had never used it before began buying it.

3. Overloading and weightment of wagons.—*Mr. McLean.*—The reason why we say that our open wagons cannot be overloaded is that our open wagons are designed to carry 42 cubic feet per ton of carrying capacity.

The President.—How do you deal with the difficulty that the specific gravity of coal varies from 38 to 48?

Mr. McLean.—I understand that we get about 25 per cent. of wagons overloaded on the Parasias coalfield. The coal is brought down from the various collieries to Junnordeo weighbridge where the collieries are given an opportunity of adjusting the wagons. At Ghugus and Ballarshah the wagons are actually weighed at the collieries by the colliery people.

Mr. Burn.—The collieries at Ghugus and Ballarshah are owned privately. We have our men there to supervise weightment.

Mr. McLean.—In the Pench Valley, we have about 10 colliery sidings from which the coal is invoiced to Junnordeo in addition to that we have our mines at Mohpani and further south we have the Ballarshah and Ghugus collieries which belong to Sir Maneckji Dadabhoi.

The coal from the Pench Valley collieries is weighed by us. We have some trouble with overloading. About 25 per cent. of the wagons have to be adjusted at Junnordeo.

Our covered wagons can be overloaded. We have moreover three types of open wagons that can take more than their carrying capacity of coal and those wagons we provide with a load-line. All the others cannot be overloaded, however heavy the coal.

Mr. Burn.—The weighbridges are situated on the colliery premises, and all the wagons before leaving the collieries are passed over them and adjusted. We have a representative to check the weights. The colliery people are responsible for the upkeep and working of the bridges.

Mr. McLean.—At Ballarshah a weighbridge is situated in the colliery premises which was installed by and belongs to the owners of the colliery. All wagons are weighed on it by a clerk employed and paid by the owners of the colliery. Wagons are placed in position for loading by engine belonging to owner of colliery. When the engine is out of order wagons are hand-shunted by coolies.

At Ghugus the weighbridge is out of use.

Only open wagons are supplied to each colliery.

(*To Mr. Legge.*)—The colliery staff does the actual weightment; i.e., they put the wagons on to the weighbridge. The Railway Company's representative is there to protect our interests.

At Junnordeo, if a wagon is overloaded, the colliery representative is informed. He has to unload and stack beside the line, but he may use the coal again to make up underloads if any. After adjustment the wagon is

reweighed and sent off. I do not think that a wagon ever proves to be overloaded after adjustment, because they know from experience how much to take off.

Mr. McLean At Junnordeo we are dealing with about 70 wagons a day, and 25 per cent. of these are overloaded. This is a big figure: it causes a lot of delay which interferes very considerably with our work. We are trying to get the colliery people to load the wagons in such a way as to obviate this adjustment. Some collieries are very much better than others in managing their loading. It is a very difficult question, to get the right amount of coal into the wagons. I should not say that it causes considerable dislocation of work, but it does cause appreciable delay to the wagons.

As regards the safety factor our axle loads are restricted to 16 tons; where we have our own weighments, we have a sufficient safeguard. At the collieries which do their own weighment, our representative is, we think, a sufficient protection. I do not think that pressure is put on the weigh-clerk by the colliery people. At Ballarshah they handle about 20 and at Ghugus about 10 wagons per day.

The Pench Valley collieries turn out about 200,000 tons a year. It varies very much month by month on account of the slack season. It would be about 20,000 tons a month during the busy season. They work on a fairly small scale.

7. Prepayment of freight.—*Mr. Burn.*—The system of prepayment of freight is in force here both on our own coal and also on foreign coal. The reason why the question was raised and the rule was enforced was because sometimes when the coal arrived the consignee declined to take delivery: the coal was left on our hands and we could not get enough to cover the railway freight when we sold it by auction. At some stations where there was a demand merchants came forward when we sold by auction, but at others there was no demand at all and we had to send the coal elsewhere. There is also the difficulty, I think, that we cannot sell it at once because we have to give the consignee a chance of taking delivery.

Mr. McLean.—There are special reasons for prepayment in the case of coal because the freight charges bear a very high proportion to the value of the coal at destination. For instance, we heard that in the Punjab the merchants combined to order coal, refused to take delivery and then having joined a ring bought in the same coal very cheap. That is why we have introduced the prepayment system. So long as coal was consigned "bearing" the consumers could, by forming a ring, exploit the proportion that freight bore to the pithead price.

Mr. Burn.—This system has been in force on this system since 1st October 1922. I do not say that before that we lost a considerable amount of money. We followed the action taken on the Bengal lines. They put the prepayment system into force before we did; then we found that we were up against the same trouble and we followed their lead. The East Indian Railway introduced in on 1st December 1917 and the Bengal-Nagpur Railway on 16th December 1917.

Mr. McLean.—(To *Mr. Legge.*)—The Great Indian Peninsula is not in favour of abolishing prepayment.

(To the *President.*)—I cannot remember if this action was taken on the recommendation of the Railway Conference. But I do not think the question came up before the Conference.

Mr. Burn.—We enforced the prepayment system not only for coal but for all perishable articles and for some that are of very low value compared with the freight chargeable on them.

Mr. McLean.—We enforce it for stone but not for manganese.

Mr. Burn.—I shall put in a list.*

Mr. McLean.—We have a system of weekly bills for the convenience of the despatchers. Firms permitted to avail themselves of the system have to give a deposit; the credit note has to be met on presentation. Only four coal firms use the credit note system.

18. Coal depôts in Bombay.—*Mr. McLean.*—Most of the coal that comes to Bombay by rail goes to the coal bunker of the Port Trust. The revenue coal goes to our sheds at Byculla.

Mr. Burn.—I put in a statement showing the figures for coal coming into Bombay by rail. *Vide Appendix G.*

We have no public coal coming into our depôt at Byculla but that depôt is still working. All the private coal coming on our system is handed over to the Port Trust Railway at Wadala and taken by them to the coal depôt.

Mr. McLean.—It is correct that the Port Trust charge Rs. 5 per wagon as their charge for taking it down from Wadala to the Coal Depôt. I agree that for coal this is a fairly heavy addition to the cost: it comes to 4 annas per ton on a 20-ton wagon fully loaded.

Mr. Burn.—(To *Mr. Wadia.*)—We quote the same rates whether the coal is to be handed over to the Port Trust Railway or delivered at Byculla; and they add their own charges for the work done on their own line.

Mr. McLean.—The Port Trust are now investigating the question of reducing the expenses on the Port Trust Railway, and it is quite possible that they may be able to reduce their costs. It is more or less inevitable, though, that a small railway should be more expensive in its working than a large one.

8. Demurrage at the docks.—*Mr. McLean.*—We have a special wagon hire arrangement with the Port Trust.

Up to October last this arrangement allowed an average detention of 48 hours per wagon but now it is 24 hours calculated on the individual wagon, with an addition of 12 hours in the case of reloading.

The fact is that if the time does not exceed 24 or 36 hours as the case may be, we are not concerned; if it does exceed that, we recover hire on the excess.

The rate prior to October was 3 annas for a 4-wheeled wagon and 6 annas for a bogie per hour but this was reduced from 1st October 1924 to 1 anna 8 pies per 4-wheeler per hour (bogie wagons being reckoned as two 4-wheelers).

Mr. Burn.—(To *Mr. Legge.*)—Our freight of Rs. 15-6-0 includes the terminal charge of 4 annas and also Re. 1 ghat charge.

Mr. McLean.—The terminal charge is not for services rendered by our railway; it is included in the amount that we pay to the Port Trust on account of the terminal services rendered by them on our behalf. The amount thus paid is at present 6 pies per maund or 14 annas a ton. That is in addition to the amount of Rs. 5 charged by them to the public. We pay the 6 pies per maund on coal going out of the docks too. We pay this terminal of 6 pies per maund out of our freight provisionally pending the settlement of a dispute as to the proper amount payable. We pay it under protest.

Mr. McLean.—The advantage of sending coal down to the Port Trust is that it rids Byculla of what is practically an offensive trade.

(To *Mr. Wadia.*)—*Mr. Burn.*—When we were working coal at Byculla we dealt with certainly 50 or 60 wagons per day. Now it is reduced to practically nothing, because the consumers decide where the coal should go, and they want to have it at the coal depôt. There is a goods depôt at Byculla which is open for coal-bookings but people do not use it for that commodity. The reason said to be generally given by the collieries that they send the coal to the Port Trust because the Great Indian Peninsula will not receive it at Byculla is not correct: Byculla is open for receiving coal and coal is being

received there, though in very small quantities. The probable reason is that we have no real stacking space and so the coal has to be cleared at once because we cannot allow stacking. It is impossible for us to provide any stacking space of any moment.

I have not heard of any instances of an additional charge being realised on coal consigned to Byculla but taken first by mistake to the Port Trust. If such a thing happened it was very regrettable.

Mr. McLean.—I take it that payment was made under protest and subject to a claim afterwards.

Mr. Burn.—The reason for coal going down to the Port Trust is not the abolition of a stacking ground at Byculla for we never had stacking ground at Byculla. Nor is the reason any change in the terminal charges for any changes made applied equally to coal going to the Bunder.

12. Variations in charges levied on coal.—*Mr. Burn.*—The railway freight from the Pench Valley coalfields was reduced from 1st August 1923. The reason why this reduction was necessary was the alarming decrease in the outturn of the collieries which is reflected in the figures put in by us. The reason why the collieries had to restrict their output was that Bengal coal was competing in the areas formerly served by the Pench Valley field.

In the previous year, there had been a strike on the Bengal fields, and the Pench Valley collieries had been able to hold their market. But when the Bengal collieries had a surplus again they sent it down the Great Indian Peninsula and Pench Valley collieries found it difficult to compete. The Bengal coal was of higher calorific value and quality and it was necessary to support the Central Provinces coal against its competition. It was with this object that we reduced the rates. These rates operated over shorter distances and therefore Central Provinces coal still gave a better return per maund per mile to the Great Indian Peninsula than coal from Bengal. We have been attacked on the ground that this was not a proper thing to do. But you must bear in mind the recognised principle that, other things being equal, the lower-priced article should be charged at a lower rate. Pench Valley coal is a lower-class coal than the 2nd class Bengal coal, and therefore, apart from any other reasons, we have, in our opinion, a right to quote a lower rate.

Mr. McLean.—The most cogent argument is that the Central Provinces collieries are local to the Great Indian Peninsula. Our interest lies not only in moving the coal but in keeping the collieries alive. If we increase the output by giving reduced rates to our collieries, we probably double the traffic over that section. If the collieries die out, we lose the incidental traffic such as hardware, piece-goods, food-stuffs, etc. When we move coal from collieries on our own line there is a repercussion on other classes of traffic on our line: when we take coal from other railways there is no such result. Moreover the coal coming from other railways tends to throw wagon balances at junctions against us and we have often to stop or restrict our own booking till we get the wagon balances adjusted.

(*To Mr. Legge.*)—As the coal from collieries on our system is relatively short distance traffic, we get the advantage, when we carry it, of the higher scale rates: when we carry coal which comes from the East Indian Railway or Bengal-Nagpur Railway we get less owing to the telescopic rate. Thus although our scale for Central Provinces coal is lower the income from it per ton mile is higher.

Mr. Burn.—We have made no further reduction after 1st August 1923. I would like to point out that in spite of the reduction in the freight the outturn of the Central Provinces coal has still gone down. The reduction has not even maintained raisings at the old figure.

Mr. McLean.—We have reduced the freight on through booking over the Bombay, Baroda and Central India as well as locally on the Great Indian Peninsula.

(To Mr. Wadia.)—Coal for Ahmedabad from Bengal does not travel on our lines: it goes *via* Agra East Bank. Coal from the Central Provinces goes to Ahmedabad *via* Ujjain.

Mr. Burn.—Generally the Bombay, Baroda and Central India get the same rate per maund per mile for coal from the Central Provinces as for coal from Bengal collieries.

Mr. McLean.—Roughly speaking 1½ tons of Central Provinces coal are equal to 1 ton of Bengal: that is a very important consideration for rating purposes because, if we charge the same rate on both it would obviously restrict the market of the Central Provinces coal.

Mr. Burn.—I believe that sometimes coal from Junnerdeo gets a higher price than Bengal coal. But I cannot understand why, and I cannot reconcile this with the decrease in the output of the Central Provinces coal.

(To Mr. Whitworth.)—The present freight on coal from Pench to Bombay is Rs. 9 per ton. The extent of the reduction varied over different distances. It varied from 33 to 16 per cent. The way we worked it was to take the minimum scale fixed by the Railway Board and to add 10 per cent. to it in every case.

The scale is:—

from 1 to 300 miles	. . . . .	·01
from 300 to 500 miles	. . . . .	·03
over 500 miles	. . . . .	·05

15. **Possibility of rebate on Bengal coal sent to Bombay.**—Mr. McLean.—If a rebate were given to Bengal coal coming to Bombay over the Great Indian Peninsula, I should then still further reduce my revenue from Bengal coal as against the Central Provinces coal.

Mr. Burn.—We get a good deal of Pench Valley coal in Bombay and I know that it is used in mills. The collieries in the Central Provinces have sent people round to different mills with a view to instruct them how to use their coal.

Mr. McLean.—On the question of giving a rebate to Bengal coal brought by rail to Bombay, with the object of enabling it to compete with South African coal, I can say nothing unless I am told how much the rebate would be and on how much coal. Otherwise I cannot say whether it would pay the railway to carry the coal. To the question whether I am prepared to make the experiment and lose money on sheer conjecture, my answer is definitely "No."

My railway would certainly like to have coal coming through from Bengal, if it came in complete train loads and if it came at certain times in the year, *i.e.*, in the slack season or, any, between May and October. We have already proposed a considerable reduction in the rates for the slack season when our equipment is idle, but our neighbouring lines are not prepared to fall into line with us. I shall send the Committee a copy of the *correspondence.

16. **Rates for locomotive coal.**—(To Mr. Legge.)—Mr. Burn.—The rate for revenue coal is Rs. 13-14-0. It is a recognised principle that, as railway material, such coal should be charged less than public coal.

Mr. McLean.—We consider that this rate covers our expenses. As regards our own revenue coal, the freight on the Great Indian Peninsula Railway comes in as an item on both sides of our accounts, revenue and expenditure. Of course with a lower scale for revenue coal over foreign line freight is somewhat reduced.

Possibility of rebate on Bengal coal despatched from Bombay up-country.—Mr. Burn.—Last year only 27,000 tons of coal went up-country from Bombay. Before 1920 it hardly exceeded 12,000 tons except in one year

and it is therefore hardly worth troubling about the idea of giving it a rebate.

Mr. McLean.—(To *Mr. Legge*.)—From the point of view of revenue, it would on the whole be satisfactory to the railway to move coal up-country from Bombay if it were readily available and easily loaded. We have a lot of empty wagons which could be used to move it. There is always a flow of empties towards the North-East. But we have to think of our Central Provinces coal first because that traffic affects us in more than one way and it is more valuable to us to keep the coal industry alive than it is to get a certain amount of coal-traffic from Bombay up-country.

It will be noticed that consumption overlaps, 27,000 tons going up from Bombay and 13,000 coming down from Peach.

Mr. Burn.—That is because the up-country mills were getting in emergency-stores. In emergencies Sholapur draws on Bombay for coal but usually it gets it from the Nizam's state.

19. **Pilferage.**—*Mr. Burn.*—Pilferage of coal on our system is considerable. One of the best means of reducing the pilferage is the improvement of the Watch and Ward Staff on the different railways: we have recently taken steps to improve ours. Another measure is to improve the lighting of the yards where coal is coming.

I should like to draw the attention of the Committee to the recommendation of the Railway Police Committee of 1921 referred to in our written evidence. If an Act such as they suggested be put in force, it would be a great help in preventing pilferage of coal. But I understand that the provincial legislatures to whom the question of legislation has been left have not taken any action on these lines.

We find that things are improving since our Watch and Ward Staff has been reformed.

Mr. Burn.—We use for coal both open and closed wagons, but open as far as possible. The collieries prefer open wagons as being easier to load, though they are more open to pilferage. Some of the Central Provinces collieries have tipplers.

(To *Mr. Wadia*.)—To whitewash the coal after loading would not prevent pilferage. It would only enable us to see whether coal had been stolen and would not prevent people stealing it.

20. **General suggestions.**—*Mr. McLean.*—We are now trying to speed up all our traffic by making use of through trains as far as possible, and during the last two years this has enabled us to make a great improvement. We have some trouble with unmarshalled trains handed over to us by the East Indian Railway. We have to run the wagons from Jubbulpore to Itarsi down to Itarsi and marshal them there. Another great source of delay is when other railways do not look after the vacuum brakes: it is not so much that the wagons are not fitted with them but that they are not kept in proper condition. The rubber fittings deteriorate quickly if they are not constantly used, and on some railways they are very little used. We often have to refit a whole train.

(To *Mr. Wadia*.)—It would take about four days to bring a through train of coal from Jubbulpore to Bombay. I should put the turn-round from the coalfields to Bombay at about 30 days. From the Central Provinces collieries to most destinations takes about 15 days.

As regards the suggestion that rakes should be run right through to Bombay we cannot avoid splitting them at Igatpuri to get them down the ghats. The only way of getting a whole rake down at a time is to sandwich an engine in the middle of the train. It is inevitable that we should split up the rake at some point, for otherwise we do not get our braking power.

(To *Mr. Legge*.)—There is nothing in the suggestion that there is too much train examination so far as this railway is concerned. We are now concentrating this work at certain important points. We have reduced the

number of examining stations from 40 to I think 13 and are proposing to reduce them still further. Of course, we have to give the wagons a thorough overhaul when they are examined. Our examining staff have been removed to the bigger junctions.

21 and 22. **Oil-fuel and electricity.**—*Mr. McLean.*—As regards consumption of oil-fuel we are aiming at a figure of 100,000 tons a year. We have contracted for that amount. We use oil-fuel on our Bombay section, for all our suburban trains and for most of the main-line trains up to Igatpuri on one side and Kasara on the other. But if the new standard engine which is now being designed proves satisfactory it would probably pay us to scrap our existing engines and replace them by engines fit to burn Central Provinces coal.

Out of 984,000 tons of coal used on the Great Indian Peninsula 116,000 tons now come from Ballarshah or other collieries working the Central Provinces measures.

Mr. McLean.—We have now got a certain section of the line electrified, and if we electrify up to Poona and Igatpuri, as we wish to, then we shall transfer our oil-burning engines to the Igatpuri-Bhusawal section, and shall get a total reduction in our consumption of Bengal coal of 239,000 tons a year.

The actual cost of working on oil is a trifle higher than with coal but the convenience of it is tremendous. Besides, our 10-coupled type of engine cannot be fired with coal.

We have two collieries of our own, one in the Central Provinces and one in Bokharo Ramgarh. I may explain that when we took up the latter, we were using a type of engine which could not burn the Central Provinces coal: if we succeed with the new standard engine designed for burning low-grade coal, we shall ultimately eliminate Bengal coal. Presumably other railways could use the same type of engine for burning low-grade Bengal coal.



APPENDIX G.
Statement showing the coal traffic received into Bombay.
(Vide oral reply to Question 18.)

Period.	FROM G. I. P. COLLIERIES.				FROM E. I., B. N. & N. G. S. COLLIERIES.			
	Peach Valley.	Chunab.	Dallashah.	Coitoria.	Vid Jubul-pore (E. I.)	Vid Nagpur (B. N.)	Vid Jubul-pore (B. N.)	Vid Wadi (N. G. S.)
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Year ending—								
31st December 1912					57,728	12,229	..	917
Quarter ending—								
31st March 1913					8,670	5,303	133	37
Year ending—								
31st March 1914					33,237	13,317	47	1,116
31st March 1915			18		229,559	78,753	89	3,781
31st March 1916			14		570,292	284,689	39	3,817
31st March 1917	1,284				943,163	331,500	..	505
31st March 1918	6,579	1,449			418,490	399,187	..	1,856
31st March 1919	544	1,400	235		590,821	339,929	..	940
31st March 1920	8,683	318	472		710,339	237,861	..	704
31st March 1921	6,721	453			548,857	344,786	..	5,641
31st March 1921	25,306	851	328		107,750	140,187	..	3,220
31st March 1922	28,252	778	403	53	106,933	74,695	..	10
31st March 1923	11,437	103			59,864	98,833	..	274
31st March 1924	13,102	73	501					

(v) Port Commissioners, Calcutta.

WRITTEN STATEMENT.

1. **Shipment and bunker coal handled at the docks.**—Please see Annexure “A.”

2. **Total number of wagons loaded with (a) shipment, (b) bunker coal received at the docks.**—Annexure “B” gives the number of wagons received loaded with coal during each half year in the period 1913 to 1924 inclusive. Wagons received loaded with coal are not shown divided into cargo and bunker coal either in the Junction Registers or in the Port Commissioners’ Position Books. An approximate division can be made by dividing the number of wagons shown in Annexure “B” between cargo and bunker coal in proportion to the tonnage of each class as given in Annexure “A.” The result of this calculation is shown in Annexure “C.”

3. **Number of wagons and amount of other commodities handled at docks.**—Please see Annexure “D” and “E.”

4. **Taking over of loaded coal wagons from the Railways and sorting for coal berths.**—On arrival at East and West Dock Junctions, wagons loaded with coal are chalked-marked by Yard Clerks according to shippers’ orders. They are marshalled by Yard Foremen and sent forward to the berths signified for loading.

5. **Check on (a) prompt placing and removal of coal wagons at the berths; and (b) turnaround of coal wagons.**—(a) The Port Commissioners’ shunting yards are staffed by experienced Yard Foremen, etc., whose duty it is under the supervision of the General Yard Superintendent to place wagons alongside vessels without delay. At the berths there are experienced Coal Clerks whose duty it is under the supervision of the Coal Superintendent and his Inspectors to ensure the quick placing, release and removal of stock. This latter staff is in direct touch with the shippers of coal and their work forms a check on the Railway work. The following forms are prepared every day:—

1. A daily station report is prepared at 6 hours by Yard Masters, East and West Dock Junctions, showing the number of trains received, time taken in breaking up and time taken in sending wagons to destinations. This report is examined each morning by the General Yard Superintendent.
2. A daily statement is prepared at 6 hours by the Coal Superintendent showing number of wagons received, released and left over during the previous 24 hours at the Coal Berths. This statement is checked by the General Yard Superintendent and by the Coal Superintendent, who discuss the position each morning and satisfy themselves that no avoidable delay is occurring. It is also closely examined in the Traffic Manager’s office before submission to the Chairman.
3. Particulars of wagons on hand are exhibited on a notice board outside the Coal Clerk’s office, opposite No. 20 Berth, for the information of shippers, who are thus enabled to see the exact position of their consignments.

(b) The prompt turnaround of wagons is secured by measures indicated under (a) but any failure of these arrangements must quickly come to notice through resultant congestion in the yards and difficulty in shunting, with an increase in the average time of return. These average times are closely watched in the Traffic Manager’s office. It is found that a large percentage of wagons are returned within 18 hours from the time of taking over and the bulk within 24 hours, against the total time allowed of 48 hours. 100

East Indian and 100 Bengal-Nagpur Railway wagons taken at random between the 23rd and 30th November 1924 show:—

74 wagons or 37 per cent. returned within 18 hours, 174 wagons or 87 per cent. within 24 hours and the remaining 26 wagons or 13 per cent. within 48 hours.

6. Average turnround of all wagons at the docks.—Annexure "F" shows the average turnround—East Indian, Eastern Bengal and Bengal-Nagpur Railway wagons being shown separately. The average figure is obtained by totalling the number of hours each wagon is on the Port Commissioners' premises from the time of taking over at Dock Junction until the time of making over at the same junction, and dividing this total by the number of wagons. This average includes all wagons back-loaded.

7. Possibility of improving lay-out of sidings at the docks.—During the last three years the facilities for receiving, marshalling and despatching coal wagons have been improved and the placing and stabling lines at the mechanical and labour berths have been extended. Another improvement including the extension of the coal sidings has recently been sanctioned by the Commissioners. Beyond these it is not considered that any other improvement or alteration is called for at present.

8. Suggestion for turn-tables or traversers.—We do not consider that the provision of turn-tables or traversers at the coal berth sidings would facilitate the removal of unloaded coal wagons.

9. Payment of demurrage by Port Commissioners to the forwarding railways.—Railway wagons are allowed to remain on the Port Commissioners' premises free of charge for 48 hours, after which a hire charge is levied at the rate of 1 anna 8 pies per hour for four-wheeled and 3 annas 4 pies for bogie vehicles. Hire is payable at these rates on the aggregate of wagon hours in excess of 48 multiplied by the total number of wagons received, and it is not possible to give the number of wagons under this system. The total paid under this system since its introduction in March 1922 amounts to Rs. 3,317-11-4, the whole of which was incurred in May—June 1924.

10. Percentage of wagons on which demurrage levied.—The percentage of wagons on which the Port Commissioners paid demurrage during the three years prior to the introduction of the present system is shown in Annexure G. As to percentage under present system, see answer to question 9.

11. Coal-loading berths and mechanical appliances.—There are ten coal berths in commission, of which two berths are fitted with mechanical appliances.

The mechanical plants are of the type known as Beckett's Plant. Each plant consists of five hydraulic cranes, each crane being capable of lifting $5\frac{1}{2}$ tons of coal in cylindrical skips having cone shaped bottoms held in place by a vertical rod passing up through the skip and attached to the burden rope of the crane. The coal is unloaded by coolies from railway wagons into hoppers travelled on tracks to suit the position of the crane and the hatch of the steamer. For loading the skip is lowered into a trench with vertical walls which is provided parallel to the quay front and the coal from the hoppers, one on each side of the skip, is discharged into the skip by operating levers on the hoppers.

The skip when hoisted up, closes, in passing, the doors of the hoppers, which then retain the coal which continues to be unloaded from the railway wagons. The skip is lowered into the steamer's hold and when near the bottom, the crane driver operates two side ropes attached to the shell of the skip which lifted and the coal runs out over the cone shaped bottom.

The cost in 1902 of the original plant consisting of four cranes having a maximum lift of 28 feet above the quay and a maximum radius of 37 feet complete with steam driven hydraulic pumps, etc. was Rs. 1,35,100 (cranes, skips and hoppers Rs. 89,200, power house Rs. 45,900).

The second plant just installed (1924) consists of five cranes having a maximum lift of 63 feet and a maximum radius of 53 feet which with skips and hoppers cost Rs. 3,87,049.

An electric driven hydraulic power station to operate both these plants has been provided at a cost of Rs. 1,87,300.

The quay wall, skip trench, railway lines, etc., at each berth cost approximately Rs. 4,60,000. At present day prices and to meet new conditions the quay, etc., would now cost about Rs. 6,00,000.

12. Type of wagon for handling coal at docks.—A four-wheeled uncovered truck is the most suitable type from the point of view of the Port Commissioners. The use of bogie trucks would lead to considerable difficulty and extra expense.

13. Provision of additional mechanical loading appliances.—If (a) "all types of wagon" is correctly understood to include covered wagons, it is doubtful whether there is any mechanical unloading plant at present satisfactorily working which can deal with all types of wagons, as the pneumatic type of appliance which is probably the only one capable of emptying completely a covered wagon is not suitable for coal. If the plant is (b) "to suit all types of open wagons" there is no special difficulty in arranging for a side-way tipping arrangement (which it is understood, is preferred by the railways) and this could be devised to suit all types of open wagons other than bogies. If bogies are to be provided for, the matter is much more difficult, unless they were the only type employed. As regards (c) a plant to suit only one type of wagon, it would be most convenient of all if only one type of open wagon were employed, and if this were of the hopper type, so that there would be no need to provide a cradle and tipping arrangements, as the hopper wagon could be made to empty by gravity into the receptacle.

14. Best type of mechanical loading appliances with reference to cost.—The answer to this question may be considered in connection with the separate note regarding different types of coal unloading plants, which is forwarded herewith, Annexure H.

Existing conditions to be met in Calcutta are:—

- (a) wagons must be emptied rapidly and cannot be detained to suit the steamer,
- (b) wagons do not arrive with sufficient punctuality and regularity to ensure rapid loading, if this is confined to direct work from wagon to ship,
- (c) consequent on (a) and (b), there is a considerable amount of dumping prior to the ship's arrival.
- (d) Indian coal being specially liable to breakage, it is necessary to minimise the direct fall of the coal into the hold. The last condition, if it is accepted as unavoidable, rules out of consideration the types mentioned in the note as A(1), (2) and (3). Of the remaining three types called B B(1) and B(3) both meet this condition and B(2) might be made to meet it, since it would be possible to fit a comparatively light anti-breakage shoot to the belt plant where the stream of coal is of small dimensions, whereas with the types described as A(1), (2) and (3) the stream of coal is large and any anti-breakage device would be correspondingly large and heavy, involving excessive dimensions for the crane by which it is operated. It is considered that the Beckett type could be improved at a reasonable cost by the addition of a side-way tipping arrangement for each crane, thus emptying the coal direct from the railway wagon, into three or four 5-ton skips, such a plant should be satisfactory for use in Calcutta. It would not however meet the case of dumped coal unless the plant were further elaborated by the addition of transporters and grabs, moving the coal between the stock heap and the radius of the crane, and which grabs were transferred from the transporters to the crane, by which they would be lifted on board.

The Commissioners however consider that plant of the type A (3) would have many advantages which might counteract the disadvantage of additional breakage and that the practicability of using this type should be carefully

examined. They are of the opinion that before any additional mechanical plant is installed the question of the best type having regard to local conditions should be fully investigated by a small Technical Sub-Committee including at least an Engineering Officer of the Commissioners and a representative of the Coal Trade.

15. **Breakage.**—To prevent excessive breakage of coal at the present coal berths when discharging into a steamer the following course might be adopted:—

- (a) *Cooly Berths.*—The Commissioners do not consider that any improvement is practicable.
- (b) *At Beckett's Plant.*—The skips should be and usually are lowered to the full extent.

16. **Calcutta Electric Supply Corporation's wagon-unloading appliances at Cossipore.**—The plant at the Calcutta Electric Supply Corporation's Power House at Cossipore is one which efficiently deals with the operations which have to be performed, namely, the unloading of railway wagons, breaking of the coal and feeding small coal to the furnaces. The plant was supplied by the Mitchell Conveyors and Transporting Co., Ltd. The railway wagon is hoisted up and side tipped into a hopper from which the coal passes through crushers and is then conveyed by a belt to a bin from which it is removed as required for the furnaces by grabs carried by electric hoists travelling on an elevated single rail track. In the case of covered wagons coolies have to be sent to the partly overturned wagons to shovel the coal through the door by which only about one-third of the contents of the wagon passes by gravity when the wagon is side tipped.

This type of machine could be adapted as part of the installation at a mechanical coal loading plant at the docks. It would not be cheap.

17. **Variations in charges (a) on coal, and (b) on other commodities at the docks.**—(a) Please see Annexure "J."

(b) Please see Annexure "K."

18. **Reasons for variations in charges.**—The variations in the shipping and dumping charges reflect the enhanced cost of labour. When the amount paid to the labour contractors was a fixed amount per ton irrespective of quantity, the Commissioners preserved a margin of $\frac{1}{2}$ anna per ton between the shipping charge and amount paid to the labour contractors as a set-off against the cost of supervision and overhead charges at the coal berths, etc. Since 1923, the labour contractors have been paid on a sliding scale under which the cost per ton for shipping, night work, etc., for the last complete year 1923-24, worked out to 8.013 annas against 8.6 annas received from the trade leaving a similar margin to cover supervision and overhead charges. The dumping charge of 3 annas per ton is paid over entirely to the labour contractors without any margin and at present it is not being recovered from the trade. The river due has been enhanced to meet the general increase in the expenses of the Port, in particular, those which cannot definitely be located to any particular trade.

19. **Total revenue from charges (a) on coal and (b) on other commodities.**

(a) Please see Annexure "L."

(b) Please see Annexure "M."

20. **Terminals.**—Yes, there is a railway terminal of 4 pies per maund received from the railways on coal and all other commodities booked to the docks and there is a railway terminal of 2 pies per maund on coal booked to the Shalimar Coal Depot.

21. **Possibility of reducing charges on coal at the docks.**—It will have been noticed from what has been stated above that the margin between the shipping charge and the disbursements to labour-contractors approximates to $\frac{1}{2}$ anna per ton and the net amount received from this source during last financial year was Rs. 33,892. Against this the cost of supervising the working of the coal docks, exclusive of provision for leave, pension, Provident Fund, etc., was just double this margin in receipts, leaving nothing to meet the cost of overhead charges on the expenditure incurred

in providing the coal dock, in maintaining the head of water and in general supervision. In regard to the river due attention is directed to the special treatment accorded to coal from the commencement of the War. In 1913-14, the river due on coal was:—

Cargo coal	4 annas
Bunker coal	3 annas

while that on all other commodities except manganese ore was 4 annas, manganese being 1 anna 6 pies. The present position is that the river due on coal is:—

Cargo coal	8 annas
Bunker coal	6 annas

as compared with Re. 1 on all other commodities except manganese which is 10 annas. Proposals have recently been sanctioned by the Commissioners under which there is a further enhancement of the river due on all other commodities except coal and manganese. As regards the railway terminal, the realisations from this source are shown in the statement attached—Annexure "N," from which it will be noted that whereas coal contributed $\frac{4}{5}$ of the total figure in 1912-13, it now contributes less than $\frac{4}{5}$. A scheme for the improvement of the lines serving the coal berths is about to be undertaken, the cost of which is about Rs. 5½ lakhs.

The Commissioners do not consider that under present conditions coal is contributing more than its fair share to the finances of the Port as a whole, but if the quantity of cargo coal increases considerably it will be possible for them to reduce their charges without throwing any additional burden on other sections of the trade of the Port. The Commissioners' budget for the current financial year was based on an estimated total shipment of 1,525,000 tons of cargo coal through the Kidderpore Docks and the Garden Reach Jetty, and an increase of the total shipments to about 1,700,000 tons and the re-imposition of the dumping charge might enable the Commissioners to reduce the river due to possibly 6 annas per ton.

22. Suggestion for charging river dues to the steamer.—It is not considered that the trade will be benefited by the river due being charged against the steamer instead of against the shipper. This due is an impost on goods and not on vessels and the Commissioners would not be prepared to modify its general character in this direction. The question of whether the river due charged on coal should be paid by the owners of the vessel or by the shippers is not directly their concern and could be arranged between these two parties by mutual consent and it is not clear that any benefit would result to the trade.

23. Departmental control of labour at the docks.—If the Port Commissioners were themselves to undertake the supply of all labour at the Coal Docks, they would be under the necessity of spending considerable sums in the provision of substantial coolie lines and these would have to accommodate the maximum head of labour. If the shipments of coal can be established at a constant figure and the trade is not subject to wide fluctuations, it might be possible for them to undertake the work without loss of economy but the present system has the advantage that the labour-contractors have sources of supply to meet sudden variations in the demand both in the locality of Calcutta and elsewhere, which would not be open to the Commissioners and there are minor difficulties such as the necessity of advance to Sirdars which would have to be met.

24. Opening of steamer-berths.—The usual period of notice given to the railways is six days but if shippers specially ask for a longer period 8 to 10 days are allowed. The principle followed in opening stations is the necessity of controlling despatches and arrangements are made on the assumption that coal will begin to arrive at the docks a day or two before the vessel, this arrangement depending on information furnished by the steamer agents as to the ship's probable date of arrival at the loading berth. The results are generally satisfactory.

25. **Dumping accommodation at the docks.**—The total dumping space available at all coal berths will accommodate approximately 80,000 to 100,000 tons. A steamer on being declared for a certain cargo is allowed a loading berth and each berth has its own dumping ground on which coal can be tacked pending the vessel's arrival. When wagons arrive in excess of the vessel's requirements it is necessary to unload the excess at any available berth.

26. **Objections to dumping.**—The objections to dumping are that it involves a waste of labour through additional handling and longer leads and additional breakage of coal and, in particular, that it militates against the installation of any purely mechanical system of loading. Assuming that the first consideration is to load a vessel quickly, regularly and punctually, dumping can only be avoided by the punctual and regular arrival of wagons for that vessel, and it is considered that measures should be concerted with the railway authorities to this end. Under existing conditions dumping is resorted to as the only means of avoiding delay in loading and in practice it is found desirable to have from a quarter to one-third of the cargo available on the ground to secure the best results in loading.

27. **Coal depôts at Howrah and Shalimar.**—The Commissioners have no connection with the Howrah Coal Depôt. At Shalimar they are the ground landlords and let out plots to different coal companies and traders, providing prepared land, convenient railway sidings and pontoons and gangways for the loading of cargo boats.

28. **Rents charged for coal depôts.**—Rates of rent charged for coal depôts at Shalimar have been as follows per cottah per month:—

Since 1912.	From 1912 to 31st March 1920.	From 1st April 1920 up to date.
	Rs.	Rs.
First 200-foot belt from river	6	15
Next 100-foot belt from river	4	10
Remaining area up to Foreshore Road	3	7
Land west of Foreshore Road	3	5

29. **Charges on bunker coal loaded from depôts.**—No charges other than rent are levied by the Commissioners on bunker coal, except those already dealt with above.

30. **Possibility of reducing charges on bunker coal loaded from depôts.**—The Commissioners are not in favour of reducing the present charges.

31. **General suggestions.**—(a) The rapid loading of coal is now prevented by the slow arrival of railway wagons. It would be possible to open stations earlier, but this course would necessitate large quantities of coal being dumped in order to avoid demurrage being incurred on the railway wagons. It would be better in the opinion of the Commissioners to load the ship direct from wagons and this could be done if the railways could ensure regular and punctual arrival of wagons or agree to loaded wagons being stabled without incurring demurrage.

(b) The Commissioners have no suggestions to make in regard to stimulating the export trade in coal generally.

32. **Coke.**—The amount of coke shipped at the docks during 1924 will be about 5,000 tons, and this quantity is therefore insufficient to make it necessary to deal specially with coke.

STATEMENT "A."

STATEMENT OF COAL SHIPPED.

	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924. 10 months.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>A. Cargo Coal.</i>													
Docks	1,330,000	1,353,327	1,322,431	891,127	730,389	629,101	339,178	619,570	900,596	1,024,113	333,731	390,489	544,484
Overside	..	..	..	..	..	..	4,338	9,061	18,138	21,470	4,902	12,041	5,046
G. C. D.	..	..	..	..	2,657*	57,230	59,262	63,808	80,184	123,486	32,938	91,212	102,758
Total for first 6 months	1,380,900	1,353,327	1,322,431	891,127	802,046	686,331	362,778	692,439	1,008,218	1,171,069	371,661	493,742	652,288
Docks	1,436,212	1,294,100	1,127,238	801,362	774,856	184,415	364,481	727,762	1,213,367	571,359	449,754	413,773	310,696†
Overside	..	..	..	..	..	3,104	10,965	11,180	22,896	12,715	3,681	19,680	1,920†
G. C. D.	..	..	..	..	87,342	49,280	64,335	116,999	157,525	98,959	88,688	133,916	118,928†
Total for 2nd 6 months	1,436,212	1,294,100	1,127,238	801,362	862,198	236,799	440,301	855,921	1,393,788	683,033	533,023	567,369	431,544
Total of cargo coal	2,817,112	2,652,427	2,449,669	1,691,489	1,664,244	923,130	743,079	1,548,360	2,401,500	1,854,102	904,684	1,061,111	1,083,832

* G. C. D. opened June 1916.

† Four months' figures up to October 1924.

The figures for overside coal are not available up to 1917.

STATEMENT "A."—*contd.*STATEMENT OF COAL SHIPPED—*contd.*

	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924. 10 months.
<i>B. Bunker Coal.</i>													
Docks . . .	Tons. 125,906	Tons. 122,277	Tons. 141,899	Tons. 109,034	Tons. 89,980	Tons. 53,559	Tons. 28,044	Tons. 61,275	Tons. 76,868	Tons. 108,375	Tons. 17,863	Tons. 17,721	T. m. 33,484
Overside . . .	..	..	..	..	..	..	169,557	180,404	207,315	288,268	192,857	230,246	216,357
G. C. D. . . .	..	..	..	..	..	56,113	48,763	33,241	80,345	82,075	70,135	62,274	71,136
Total for 1st 6 months . . .	125,906	122,277	141,899	109,034	89,980	109,672	246,364	274,920	358,428	478,718	250,865	300,244	347,997
Docks . . .	123,346	131,918	156,222	77,581	73,017	18,161	38,363	61,402	117,879	48,455	21,886	15,875	18,476*
Overside . . .	..	..	..	..	..	159,170	182,021	225,044	293,029	300,566	219,909	250,013	198,487*
G. C. D. . . .	..	..	..	..	46,063	36,929	28,422	47,515	76,317	65,708	74,073	43,756	42,631*
Total for 2nd 6 months . . .	123,946	131,918	156,222	77,581	119,620	214,293	243,812	337,991	487,825	411,789	315,563	312,644	257,594
Total of bunker coal . . .	249,852	254,195	292,121	186,615	189,600	323,875	492,176	612,911	846,253	893,507	598,423	612,888	605,591
GRAND TOTAL . . .	3,067,024	2,906,622	3,741,790	1,873,164	1,853,844	1,244,965	1,238,255	2,161,271	3,247,753	2,747,609	1,591,107	1,873,969	1,689,423

* Four months' figures up to October 1924.

The figures for overside coal are not available up to 1917.

STATEMENT " B. "

Statement showing number of Wagons received with Coal during each half-year in the years 1913 to 1924.

Years.	Jan. to June.	July to Dec.	TOTAL.
	Wagons.	Wagons.	Wagons.
1913	96,165	88,920	185,085
1914	94,798	81,602	176,400
1915	63,033	54,130	117,163
1916	51,825	56,708	108,533
1917	53,249	19,482	72,731
1918	29,323	39,845	69,168
1919	58,185	62,896	121,081
1920	74,560	93,374	167,934
1921	82,071	47,922	129,993
1922	30,554	38,564	69,118
1923	37,273	34,565	71,838
1924	49,146	48,509	97,655

STATEMENT C.

Statement showing number of wagons received at the Kidderpore Docks with cargo and bunker coal.

Years.	JANUARY TO JUNE.		JULY TO DECEMBER.		Total wagons.
	Cargo coal wagons.	Bunker coal wagons.	Cargo coal wagons.	Bunker coal wagons.	
1913	88,223	7,942	80,691	8,226	185,085
1914	85,639	9,159	72,006	9,596	176,400
1915	56,154	6,879	49,352	4,778	117,163
1916	47,666	4,159	49,799	6,909	108,533
1917	45,885	7,364	15,769	3,713	72,731
1918	23,321	6,002	34,481	5,364	69,168
1919	51,115	7,070	55,536	7,360	121,081
1920	64,681	9,879	81,757	11,617	167,934
1921	70,407	11,664	40,945	6,977	129,993
1922	24,641	5,913	33,151	5,413	69,118
1923	32,577	4,696	31,018	3,547	71,838
1924	42,476	6,670	..	..	97,655

STATEMENT D.
DOCK TRAFFIC—Exports other than Coal (in Tons).
 Reply to Question No. 3.

Commodities.	Years.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.
		Tons.	Tons.	Tons.	Tons.	Tons.
Wheat and Seeds including Myrobalan.	1st half-year	462,992	326,203	202,696	143,616	97,026
	2nd " "	111,268	106,713	70,241	56,987	54,012
	TOTAL	574,260	432,916	272,937	200,603	151,038
Jute . . .	1st half-year	156,265	125,795	82,584	163,115	115,342
	2nd " "	310,237	238,522	212,194	215,281	232,959
	TOTAL	466,502	364,317	294,778	378,696	348,301
Tea . . .	1st half-year	44,284	44,999	41,566	51,296	47,982
	2nd " "	48,413	49,335	63,144	68,051	48,055
	TOTAL	92,697	94,334	104,710	119,347	96,037
Rice . . .	1st half-year	40,187	17,909	10,166	8,187	11,673
	2nd " "	44,715	31,454	4,979	7,115	5,042
	TOTAL	84,902	49,363	15,145	15,302	16,715
Cotton . . .	1st half-year	3,717	3,958	5,485	6,452	5,788
	2nd " "	2,290	11,977	3,472	6,674	3,262
	TOTAL	6,007	15,935	8,957	13,126	9,075
Shellac . . .	1st half-year	8,547	6,304	9,949	9,392	12,836
	2nd " "	11,993	10,078	9,318	11,635	9,014
	TOTAL	20,540	16,382	19,267	21,027	21,850
Hides and Skins	1st half-year	21,974	18,895	14,856	18,481	18,393
	2nd " "	23,223	22,549	12,627	17,295	14,208
	TOTAL	45,197	41,444	27,483	35,776	32,601
Gunnies . . .	1st half-year	11,388	9,825	11,426	32,484	51,999
	2nd " "	11,047	10,051	13,928	49,044	48,982
	TOTAL	22,435	19,856	25,354	81,528	100,981
Manganese Ore .	1st half-year	33,054	37,962	38,662	28,462	110,110
	2nd " "	44,117	37,353	19,260	54,157	120,390
	TOTAL	77,171	75,315	57,922	82,619	230,500
Pig Iron . . .	1st half-year	*	45,701	20,034	37,099	63,555
	2nd " "	*	28,416	28,855	25,946	34,253
	TOTAL	*	74,117	48,889	63,045	97,808
Sugar . . .	1st half-year	..	..	6,561	32	350
	2nd " "	..	1,144	8,058	..	79
	TOTAL	..	1,144	14,619	32	429
Miscellaneous .	1st half-year	53,530	22,006	14,672	19,418	49,901
	2nd " "	69,113	23,960	15,926	24,466	29,944
	TOTAL	122,643	45,966	30,598	43,884	79,845
GRAND TOTAL .	..	1,512,354	1,231,589	920,656	1,054,985	1,185,159

* Quantities of Pig Iron shipped are included in the figure shown against the item "Miscellaneous"—

STATEMENT D.
DOCK TRAFFIC—Exports other than Coal (in Tons).
 Reply to Question No. 3.

1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.	1924 from April to September.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
86,939	99,609	152,221	102,113	73,308	128,081	256,046	224,957
115,058	129,496	54,990	36,309	97,558	110,924	156,591	..
201,997	229,096	207,211	138,422	171,366	239,068	412,637	..
58,714	128,729	131,911	138,328	83,495	132,370	87,619	73,094
123,883	130,625	190,414	136,370	148,190	182,016	182,707	..
187,597	259,354	322,325	274,698	231,685	314,386	270,326	..
48,808	62,833	50,717	34,929	46,064	35,365	44,288	41,751
87,144	49,035	77,036	49,232	52,513	47,416	61,429	..
135,947	111,868	127,753	84,161	98,577	82,781	105,717	..
5,623	37,913	13,891	7,327	9,113	18,218	39,226	90,472
25,504	27,612	7,256	4,006	3,286	32,728	78,878	..
31,127	65,525	21,147	11,333	9,999	50,941	118,104	..
4,013	2,072	5,998	6,413	4,512	5,649	4,430	4,288
2,207	2,051	8,848	1,927	12,275	7,250	3,376	..
6,220	4,123	14,846	8,349	16,787	12,899	7,806	..
8,917	8,527	11,991	10,932	11,362	10,881	11,933	10,763
7,904	6,027	9,820	6,292	10,753	16,086	13,553	..
16,821	14,554	21,311	16,324	22,115	26,967	28,486	..
11,997	10,511	25,854	8,967	13,961	13,500	14,654	11,750
8,873	8,829	19,296	6,287	13,017	13,004	12,502	..
20,870	19,340	45,150	15,254	26,978	26,504	27,156	..
80,949	61,034	45,032	48,380	24,006	21,845	22,128	12,823
50,061	55,327	49,030	23,490	17,328	26,647	18,999	..
137,010	116,361	94,062	71,870	41,334	48,492	41,127	..
68,649	119,713	30,060	193,063	85,123	199,325	201,093	187,127
107,911	102,138	100,047	181,077	144,034	184,056	172,495	..
176,560	221,851	130,107	374,140	229,157	333,381	373,588	..
28,006	1,336	18,378	23,324	23,707	53,349	90,388	153,883
12,667	9,434	22,075	23,685	35,927	67,228	92,619	..
41,273	10,770	40,453	47,009	50,034	120,577	182,957	..
900	474	27,304	26,709	1,501	6,468	7,617	56
909	6,410	11,801	3,106	6,671	14,627	4,645	..
1,809	6,884	39,105	29,815	8,172	21,095	12,262	..
20,167	10,577	36,708	39,208	28,248	40,862	63,946	73,351
17,714	21,259	45,801	23,145	32,231	46,273	78,193	..
37,881	37,836	82,509	62,353	60,479	87,135	142,139	..
9,995,112	1,097,562	1,146,479	1,133,719	974,783	1,411,166	1,722,305	886,295

no separate records were kept.

STATEMENT E.

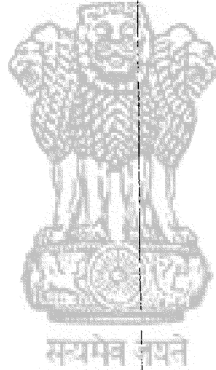
Statement showing number of wagons received at the Docks with other cargo than coal during each half-year in the years 1913 to 1924.

Years.	FOR THE DOCKS.		FOR JETTIES AND PORT TRUST RAILWAY.		TOTAL.		GRAND TOTAL.
	January to June.	July to December.	January to June.	July to December.	January to June.	July to December.	
	Wagons.	Wagons.	Wagons.	Wagons.	Wagons.	Wagons.	Wagons.
1913	27,629	26,771	1,173	1,785	28,802	28,556	57,358
1914	31,868	19,104	1,962	1,510	33,830	20,614	54,444
1915	30,909	22,072	2,097	2,015	33,006	24,087	57,093
1916	28,107	23,393	2,167	2,709	30,274	26,102	56,376
1917	22,130	18,729	1,891	2,896	24,121	21,625	45,646
1918	14,279	26,472	1,790	2,123	16,069	28,595	44,664
1919	20,649	20,760	2,380	2,773	23,029	23,533	46,562
1920	20,831	23,242	1,671	1,761	22,502	25,003	47,505
1921	19,763	26,320	1,218	1,348	20,981	27,068	48,649
1922	28,417	34,247	1,391	1,558	29,808	35,805	65,613
1923	41,367	38,650	1,497	1,691	42,864	40,341	83,205
1924	45,745	..	1,475	..	47,220	45,101	92,321

STATEMENT F.

Statement showing the average turn-round time of all wagons booked to Docks only from 1st January 1924 to 31st October 1924. (Jetty figures are not included.)

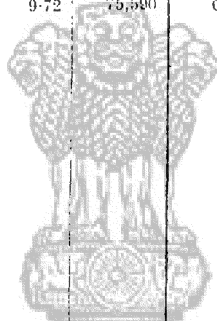
Railways.	JANUARY TO OCTOBER 1924.		
	Total Nos. of wagons.	Total deten- tion hours.	Average turning- round per wagon= hours.
East Indian Railway	119,677	4,688,774	39
Bengal Nagpur Railway	36,168	1,354,038	37
Eastern Bengal Railway	14,018	565,694	40



STATEMENT G.

Statement showing the percentage borne by the number of wagons on which demurrage has been levied prior to 1922 to the total numbers of wagons received.

Years.	1ST HALF-YEAR.			2ND HALF-YEAR.			REMARKS.
	Total Nos. of wagons received.	Total Nos. of wagons incurred demurrage.	Percent- age.	Total Nos. of wagons received.	Total Nos. of wagons incurred demurrage.	Percent- age.	
1919 .	56,962	207	30	63,494	2,028	3.19	East Indian Rail- way and East- ern Bengal Rail- way only : as Bengal Nagpur Railway figures are not available, records being destroyed.
1920 .	97,062	18,428	18.98	118,377	37,624	31.7	
1921 .	103,052	10,922	9.72	75,590	6,814	9.01	



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APPENDIX H.

Note re Mechanical Handling of Coal (vide question 14).

It will perhaps be convenient to divide the different types of mechanical appliances for unloading coal from railway wagons into the holds of sea-going ships into two divisions, namely,—

- A. Those in which the transfer of coal from wagon to ship is dependent on the action of gravity after the wagon has been placed in a suitable position, and
- B. Those in which the transfer is effected by some intermediary receptacle such as skip, belt or grab with a qualifying remark that a number of plants have been installed in different parts of the world in which combinations of two or more of these types are utilised to meet special circumstances.

The former class "A" may be sub-divided into three sub-divisions:—

- Type 1.*—Those in which the wagon is raised by being run or drawn on to an elevated staithe.
- Type 2.*—Those in which the wagon is raised by an ordinary type of portal crane after being placed on some kind of tray or platform.
- Type 3.*—Those in which the wagon with its load is raised by an hoist or elevator worked by hydraulic or electric power.

Type 1 is shown on the attached diagram as figure "A1." It is particularly suitable when a high level staithe can easily be provided as for example by being levelled out of the side of a steep hill coming down to the water. Failing these conditions, the staithe must be constructed of masonry, metal or timber. The wagons may be emptied either by means of hopper doors if they are of this type or by being revolved in a cradle tipped sideways into a shoot. In both cases gravity is relied on to empty the coal down a shoot into the hold of a vessel. When the vessels are large sea-going steamers such as those employed in the Calcutta trade and when these are floating on water but little lower than the quay level as in the Kidderpore Docks, this type is unsuitable for adoption and the more so as the amount of breakage is considerable.

Type (2).—This type is shown on the attached diagram as figure A (2), and it consists of a heavy pillar revolving on a built pedestal which has an archway large enough to pass shunting locomotives and wagons. The turning of the pillar and jib is effected by hydraulic cylinders and the lifting mechanism consists of an hydraulic cylinder with ram and multiplying sheaths. There is also a tipping cylinder acting upon the tipping chain by which the rear end of the wagon is tipped up. Attached to the lift and tipping chain is a cradle for receiving coal trucks, of either end or bottom-opening door pattern, which fits into a seat placed on the rails at any point on the quay. The plant at Middlesborough has a lifting power of 15 to 30 tons and the maximum height of lift is 66 feet. This type is not in very general use and is believed not to have been adopted to any considerable extent within recent years. The amount of breakage is considerable and there is no special advantage connected with it.

Type (3).—This type is shown as figure "A (3)" on the diagram. Tips of this kind were recently installed at Immingham; they deal with end-tip or bottom door wagons of a gross weight of 30 tons, the dimensions of the wagon provided for being 25 feet long over buffers. The full wagons are drawn on to the cradle at the quay level and the empties are run off on an overhead viaduct. The hoists are operated hydraulically and the shoot is fitted with hinged doors at the nose end adjustable by chains. These hoists are said to lift at the rate of 180 feet per minute with a pressure of 300 lbs. They have the advantage of discharging direct into a steamer and if only one hoist per berth is provided, are comparatively cheap but this means

that loading can only proceed at one hatch at a time and the hoists being very massive are often made immoveable, so that the steamer has to be moved to serve the different hatches. When loading into comparatively large steamers, which would be high in the water when empty, the breakage of coal must be considerable.

B (1).—Crane and skip type.—This type is shown in the diagram under figure "B 1" and consists in its simplest form, such as the "Lewis-Hunter" plant at Cardiff, of an arrangement for end-tipping the contents of a 10-ton wagon (now being enlarged to 20 tons) into a steel box or skip which is put on board a steamer and lowered into the hold, and then emptied by the opening out of the bottom of the skip. The cranes used may be sufficient in number to load at each hatch simultaneously and can be made to move along the quay to fit different steamers, and to minimise trimming. The "Beckett" type in use at the Kidderpore Docks is a modified version of this plant; it was especially recommended by the Government Committee in 1901 to meet the conditions obtaining at Calcutta, namely, the use of covered wagons, the use of wagons with larger loads of coal than could readily be handled in one skip load and a considerable proportion of dumped coal. Roughly speaking, the "Beckett" plant requires half the labour force of a berth using labour only, as the wagons when unloaded direct into the steamer are emptied by coolie labour through an intermediate hopper into 5-ton skips which are employed.

Type B (2).—Continuous Belt or Conveyor.—This type is shown under figure "B (2)". With this type the wagon is emptied by being tipped endways or sideways into a steel hopper which feeds a receiving belt which in turn either feeds direct through a shoot into the ship's hold or transfers the coal to another belt running along the quay, from which it is taken by two belts over the ship and down the shoot. The belt may be made of flexible steel or of a composition of canvas and rubber. The type of this plant manufactured by Messrs. Fraser and Chalmers at the Kidderpore Docks was completed in 1914 but was not found acceptable to the trade and was difficult to operate owing to the inability of the railways to provide sufficient end-tipping open wagons on which its whole success depends. This plant manufactured by Messrs. Fraser and Chalmers at the Kidderpore to the belt and is not at present in use, as it is considered to involve a considerable amount of breakage. Other minor defects were experienced in the first instance but these could have been overcome. Such plants are in use at Hull, Port Talbot and South Africa.

Type B (3).—Overhead "Gantry" crane and skip.—This type is shown under figure "B (3)" and consists of an overhead "Gantry" on which runs an electrically operated lifting arrangement which can lift either from an open wagon or from a stock heap and then run over the steamer's hatch, where it can be unloaded well down in the hold of the vessel. Provided there are as many gantry cranes as there are hatches, work can go on simultaneously at all the hatches but it is difficult to move the transporters along the quay and it is not possible when loading direct from wagon to ship, completely to empty even open wagons by the grab. It is, however, far more suitable than any other type of plant for loading from a stock heap to the steamer.

STATEMENT J.

17 (a). Statement showing charges on coal.

Year.	Cargo coal.	Bunker coal.	REMARKS.
	Per ton.	Per ton.	
1912-13 to 1915-16.	Rs. A. P.	Rs. A. P.	
Shipping	0 5 6	0 5 6	
Dumping	0 2 0	..	
River Due	0 4 0	0 3 0	
1916-17.			
Shipping	0 5 6	0 5 6	
Dumping	0 2 0	..	
River Due	0 4 0	0 3 0	
War Surtax	0 2 0	0 1 0	From 1st April 1916.
1917-18 to 1919-20.			
Shipping	0 5 6	0 5 6	
Dumping	0 2 0	..	
River Due	0 4 0	0 3 0	
War Surtax	0 6 0	0 3 0	Revised from 1st August 1917.
1920-21.			
Shipping	0 5 6	0 5 6	
Dumping	0 2 0	..	
River Due	0 6 0	0 4 0	River due revised from 1st April 1920.
1921-22 to 1923-24.			
Shipping	0 8 0	0 8 0	
Dumping*	0 3 0	..	
River Due	0 8 0	0 6 0	River due enhanced from 1st January 1922.

* Dumping charge has been suspended from 1st January 1924.

STATEMENT K.

17 (b). Statement showing charges on some of the principal exports other than coal.

Year.	Wheat.		Seeds.		Jute.		Tea.		Rice.		Cotton.		Gunnies.		Manganese ore.*		Pig Iron.		REMARKS.
	Per ton.	Rs. A. P.	Per ton.	Rs. A. P.	Per bale.	Rs. A. P.	Per chest.	Rs. A. P.	Per ton.	Rs. A. P.	Per bale.	Rs. A. P.	Per ton.	Rs. A. P.	Per ton.	Rs. A. P.	Per ton.	Rs. A. P.	
1912-13 TO 1913-14.																			
Shipping	0 4 0	0 5 0	0 4 0	0 2 0	0 2 0	0 0 9	0 0 9	0 0 9	0 12 0	0 2 0	0 2 0	0 6 0	0 6 6	0 12 0	0 4 0	0 4 0	0 4 0	0 4 0	
River Due	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 1 6	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	
1914-15 TO 1915-16.																			
Shipping	0 4 0	0 5 0	0 4 0	0 2 0	0 2 0	0 0 9	0 0 9	0 0 9	0 12 0	0 2 0	0 2 0	0 6 0	0 6 6	0 12 0	0 4 0	0 4 0	0 4 0	0 4 0	
River Due	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 1 6	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	
War Surtax	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 1 6	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	Levied from 1st February 1915.
1916-17.																			
Shipping	0 5 0	0 5 0	0 5 0	0 2 0	0 2 0	0 0 9	0 0 9	0 0 9	0 12 0	0 2 0	0 2 0	0 6 0	0 6 6	0 12 0	0 4 0	0 4 0	0 4 0	0 4 0	
River Due	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 1 6	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	
War Surtax	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	0 1 6	0 6 0	0 6 0	0 6 0	0 6 0	0 6 0	Levied from 1st April 1916
1917-18 TO 1919-20.																			
Shipping	0 5 0	0 5 0	0 5 0	0 2 0	0 2 0	0 0 9	0 0 9	0 0 9	0 12 0	0 2 0	0 2 0	0 6 0	0 6 6	0 12 0	0 4 0	0 4 0	0 4 0	0 4 0	
River Due	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	0 1 6	0 4 0	0 4 0	0 4 0	0 4 0	0 4 0	
War Surtax	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 6 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	Rate of war surtax revised from 1st August 1917.
1920-21.																			
Shipping	0 5 0	0 5 0	0 5 0	0 4 0	0 4 0	0 1 0	0 1 0	0 1 0	0 12 0	0 2 0	0 2 0	0 6 0	0 6 6	0 12 0	0 4 0	0 4 0	0 4 0	0 4 0	
River Due	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	0 7 6	0 12 0	0 12 0	0 12 0	0 12 0	0 12 0	Rate of river due revised from 1st April 1920.

STATEMENT L.

19 (a). Statement showing the total revenue derived from charges on coal.

Year.	Shipping, etc.	River Due.	War Surcharge.	TOTAL.
	Rs.	Rs.	Rs.	Rs.
1912-13	12,55,014	9,56,381	..	22,11,395
1913-14	12,96,725	9,52,764	..	22,49,489
1914-15	10,80,225	8,18,790	..	18,99,015
1915-16	6,85,639	5,41,784	..	12,27,423
1916-17	7,53,440	5,66,306	2,07,229	15,26,975
1917-18	3,79,884	2,67,331	2,26,048	8,73,263
1918-19	4,85,580	3,31,507	4,41,485	12,58,572
1919-20	7,92,654	5,33,459	7,42,945	20,69,058
1920-21	10,02,408	11,96,562	..	21,98,970
1921-22	7,15,267	7,58,044	..	14,73,311
1922-23	5,48,239	6,98,966	..	12,47,205
1923-24	5,68,527	8,14,514	..	13,83,041

STATEMENT M.

19 (b). Statement showing the total revenue derived from charges on exports other than cool.

Year.	Shipping, etc.	River Due.	War Surcharge.	TOTAL.
	Rs.	Rs.	Rs.	Rs.
1912-13	12,74,725	8,99,118	..	21,73,843
1913-14	10,72,476	6,78,437	..	17,50,913
1914-15	10,11,025	5,35,896	1,37,914	16,84,835
1915-16	12,28,915	5,79,144	9,02,890	27,10,949
1916-17	12,68,023	5,40,020	8,57,434	26,65,477
1917-18	10,24,242	4,77,188	13,30,450	28,31,880
1918-19	9,77,448	5,14,481	19,46,460	34,38,389
1919-20	11,46,125	5,87,239	17,98,362	35,31,726
1920-21	12,50,300	16,85,744	..	29,36,044
1921-22	12,43,963	20,16,616	..	32,60,579
1922-23	17,94,393	28,17,374	..	46,11,767
1923-24	19,69,003	24,62,931	..	54,31,934

Rs.

	RS.
<i>1912-13.</i>	
Coal	4,59,600
Other commodities	1,42,854
<i>1913-14.</i>	
Coal	4,39,254
Other commodities	1,43,975
<i>1914-15.</i>	
Coal	4,04,855
Other commodities	1,31,225
<i>1915-16.</i>	
Coal	3,65,580
Other commodities	1,91,959
<i>1916-17.</i>	
Coal	3,91,010
Other commodities	1,76,691
<i>1917-18.</i>	
Coal	2,40,820
Other commodities	1,62,208
<i>1918-19.</i>	
Coal	2,88,738
Other commodities	1,87,127
<i>1919-20.</i>	
Coal	4,65,942
Other commodities	2,44,426
<i>1920-21.</i>	
Coal	8,51,227
Other commodities	2,49,347
<i>1921-22.</i>	
Coal	5,59,609
Other commodities	3,42,163
<i>1922-23.</i>	
Coal	7,18,359
Other commodities	6,75,184
<i>1923-24.</i>	
Coal	7,39,088
Other commodities	8,02,149

**T. H. ELDERTON, Esq., Deputy Chairman, Port Commissioners,
Calcutta, and W. A. BURNS, Esq., Traffic Manager,
Port Commissioners.**

(*Oral evidence—24th January 1925.*)

1. Shipment and bunker coal handled at the docks.—*Mr. Elderton.*—As regards statement A the figures represent the coal passing over our jetties and coal loaded overside in stream. They include any bunker and cargo coal loaded into ocean-going steamers from Shalimar and Howrah. Our figures do not show how much came from Howrah and how much from Shalimar, or the quantities of bunker coal for river-steamers, launches, etc., shipped from these depôts. It is possible that the total shipments from Howrah and from Shalimar could be obtained from the Collector of Customs or the Director General of Commercial Intelligence.

We have not got any figures regarding the total quantities of coal loaded overside during calendar years prior to 1917. I may explain that we keep our figures by the financial year, and we have not got details prior to 1917 from which to work out the figures for calendar years. I can furnish the Committee with figures for the financial years from 1912-13 onwards.

The discrepancy between the Port Commissioners' figure of 612,000 tons for bunker coal in 1923 and the figure of 606,000 given both by the Indian Mining Association and the Director General of Commercial Intelligence may be due to slight differences in the periods covered. I believe the Customs month for statistical purposes is the 26th of one calendar month to the 25th of the following month inclusive, whereas our statistics are kept according to the dates we recover our charges.

(*To Mr. Legge.*)—We recover our charges for bunker coal on statements given by shippers and these statements are checked by comparison with the Customs daily lists.

4. Taking over of loaded coal wagons from the Railways and sorting for coal berths.—(*Mr. Banerjee's question.*)—*Mr. Burns.*—As regards the time taken to sort and shunt the wagons to different coal berths I think it would be best to explain the whole method in which we handle East Indian Railway coal trains. We receive them from the Eastern Bengal Railway on to lines 10, 9, 8, and 7. After that they are drawn forward on to the shunting grid where the wagons are broken up. The wagons after sorting are then pushed forward through the grid into the coal berths, either to the mechanical or to the hand labour berths.

Before the trains are drawn forward to the shunting grid they have first to be jointly examined by the carriage staff but simultaneously the traffic staff take the numbers of the wagons and chalk them for their various destinations according to the shippers' orders. On the average breaking up takes 1½ hours while examining and chalking and number taking take about half an hour or at the very most one hour.

Shoving the wagons back to the coal berths would take only half an hour or so if they could go straight through; but they may have to wait in an intermediate grid for some time till the coal berth is cleared; how long depends on the time taken to release the wagons already at the berth. We cannot give detailed figures for each stage of this work but we accept the statement of the East Indian Railway that the average time is 1, 2 days for the complete turn-round.

I may mention that in our reply to Question 5 (b) we took each 100 wagons quite casually: you will see that a large number of them were returned within 24 hours.

**Note.*—Mr. Banerjee who was absent owing to illness had sent in his questions in writing.

The check exercised to see that the statements put in by the staff as to the time taken by the wagons is actually correct is an examination of the statements each morning by the General Yard Superintendent. The time taken in breaking up the train is watched very carefully in my office, but if the delay is at the berths you cannot blame the people at the intermediate grids for not getting the wagons through more quickly.

(*To Mr. Legge.*)—The chalk-marking is done according to the shippers' orders which might refer either to the berth at which the wagons are to be placed or to a diversion to another steamer. These shippers' orders are really those given by the Coal Superintendent overnight, according to the latest information which he has received from the shippers.

The Coal Superintendent is Mr. Pyster, an officer on Rs. 1,000 per month. His work is chiefly dealing with coal but he also has to watch the manganese and the hides depot. As regards his being of Officers Grade we have no hard and fast division as to grades. He is undoubtedly a superior officer and I occupied the post myself at one time.

The Coal Superintendent has his own Inspectors but he is able to give instructions to the yard foremen. These foremen are under the orders of the Yard Superintendent: this officer draws slightly higher pay than the Coal Superintendent rising to a maximum of Rs. 1,350. The Yard Superintendent would do what the Coal Superintendent wanted as regards coal, and there is the same idea all through: if a reasonable order is given by the Coal Superintendent the Yard Master would obey it as a matter of course without reference to the Yard Superintendent. There is no friction between the two sides.

It is absolutely correct to say that the check exercised in my office is based upon the check of the stock in hand. The stock in hand is checked by stock-takers who are Indians on Rs. 100. There are two of them in the East Junction Yard and two in the West Junction Yard. We have several times had a surprise check and a comparison of the results shown by these stock-takers, and we have found that their figures were accurate within a small margin.

(*To Mr. Stuart-Williams.*)—The fact that there is a railway carriage examiner at the dock junction and also a Loco. Foreman ensures an automatic check: if the returns by our staff were fudged they could not be fudged for long: the railway results would show them up.

Another point is that the yards at the docks are so close together that an officer going round the docks would at once notice if anything were badly wrong with the wagon returns.

6. Average turn-round of wagons.—As regards the figure in statement F for "average turning round per wagon hours," the reason why the figure for the Eastern Bengal Railway is higher than for the other two railways is that a larger percentage of their wagons are back-loaded and also that their empties are never returned to East Dock Junction before back-loading.

Mr. Elderton.—The apparent discrepancy between our figure of 39 hours and the East Indian Railway figure of 1·2 days is due to the latter figure referring only to coal-wagons. Similarly in our reply to 5 (b) our remark that the bulk of the wagons are returned within 24 hours refers to coal-wagons. The reason why coal-wagons are returned more quickly are that most of them are returned empty.

7. Improvement in lay-out at the docks.—*Mr. Burns.*—The improvements in facilities to which we refer in our written reply are as follows. At the hand-labour berths up to 3 years ago the service line was the third from the water and if we wished to place wagons at, say, 15 berth we had to disturb the shipment work of berths 18 and 17 and 16. We have now put in an additional shipping line on the water's edge and we have moved the service line next to the dump so when we want to put in fresh wagons along the service line we do not have to disturb the work of shipping coal on the four shipment lines.

Besides these we have remodelled the shipment lines behind berths 19 and 20 so as to serve the Beckett plant more efficiently.

Another improvement is at the bottle neck, where we have altered the arrangements so as to allow the reception, breaking up and departure of trains to go on simultaneously; with this exception only that we cannot draw out wagons for breaking up and receive a train simultaneously.

Mr. Elderton.—As regards the costs of these improvements so far as I remember the alterations at the labour berths cost $1\frac{1}{4}$ lakhs.

Mr. Burns.—As regards the contemplated improvements we have a separate plan showing them in detail. At present there is a single neck to the grid for breaking up the wagons and so it is possible to work only one engine there at a time. Our plan provides for two grids with two necks which will enable two engines to work simultaneously. In addition we propose to give direct connection between East Dock Junction and Mackinnon, Mackenzie's Garden Reach depôt as well as direct connection between their depôt and West Dock Junction and *vice versa*. Besides that we propose to put in additional stabling yards for the mechanical berths, and that will allow these subsidiary stabling lines to be used for stabling manganese ore wagons, although they are not primarily meant for manganese ore wagons.

It is not easy to say how much of the total of $5\frac{1}{4}$ lakhs to be spent on these improvements can be considered as being spent for the benefit of coal alone but I think we can say that the expenditure is mainly for the coal berths. The new extensions giving stabling accommodation for 193 wagons are entirely for coal. The other extensions for over-flow stabling from 15 to 18 berths are almost entirely for coal—a little would be for manganese. Then the two grids for the breaking up of trains will quicken the breaking up of coal trains and will allow a free flow of wagons from the breaking-up lines to Mackinnon, Mackenzie's jetty direct instead of their having to get there by a round-about route. Also wagons from West Dock Junction intended for Messrs. Mackinnon, Mackenzie's jetty will go direct instead of having to go into East Dock Junction and thence to this jetty. On the other hand the lines will also be used by wagons of general cargo going to King George's Dock and the Garden Reach berths, and so far the scheme does benefit general cargo. But mainly it is a coal scheme.

(*To Mr. Legge.*)—It benefits coal to have general cargo taken round by the avoiding line.

Mr. Elderton.—I may remark that all these improvements will not be carried out at once.

(*Mr. Banerjee's question.*)—*Mr. Elderton.*—The proposed large marshalling yard opposite Kalighat station for which land has been acquired is an entirely different matter. The original idea was to shift the Dock Junction out that way but now there is a new scheme which is to be discussed with the Railways and the Railway Board. This new dock-junction scheme will not come on for certainly 5 and probably 10 or 15 years. When the new docks have been extended greatly, the present junction will not be able to serve both docks; so the new yard is intended first to supplement and eventually to supplant the present dock junction.

(*To Mr. Legge.*)—*Mr. Burns.*—We do not intend to improve facilities by any additional works besides those mentioned above. The additions and alterations already contemplated will meet any increase in coal traffic.

Mr. Elderton.—Up to at least pre-war traffic that is.

3. Provision of turntables or traversers at coal berth sidings.—

Mr. Elderton.—The reason why we say that traversers would not facilitate the removal of unloaded coal wagons is that at present we use the four front lines as loaded lines, but if we adopt the proposal we should have to alternate loaded lines and empty lines. Besides we space out the wagons for the convenience of the coolies loading from the four lines of wagons as well as from the dumps: so we should have to put in traversers (turn-tables are out of the question) at frequent intervals. The object of the proposal is, I suppose, to

prevent the delaying of all the wagons alongside a ship because the unloading of one wagon has got behind hand: but that is a mere matter of labour supervision and it should be easy to see that all the wagons are unloaded more or less at the same rate. Even if you got out an empty wagon you could not get back a loaded one into its place.

Mr. Burns.—14 to 16 wagons would be affected and there are four shipping lines at each berth. All four lines can be worked at once but not all the wagons on each line. We never have a large enough labour supply for that.

Mr. Elderton.—You will see from the plan of the berths that it is quite easy to get out all the empties at one time from each berth even if the other berths are being used. We take out each rake of wagons from a line as fast as they are all emptied.

9. **Demurrage.**—*Mr. Elderton.*—I think the reason why the demurrage rate payable by the Commissioners to the Railways was fixed at 1 anna 8 pies per hour for a four-wheeled wagon is as follows:—Under our old agreements we paid one pie per ton of the actual carrying capacity of the wagon per hour. Under the present agreements demurrage is not paid on individual wagons and it was therefore necessary to have a fixed rate per wagon. 20 tons was taken as the carrying capacity and the old rate applied.

(*Mr. Banerjee's question.*)—*Mr. Burns.*—We have clauses in our coal agreement with our labour contractors under which we can make them pay demurrage if we incur it to the railways. The demurrage is charged when there is delay in unloading wagons. But when the results on the whole are good and when the question of demurrage arises only for a few wagons, we do not in fact recover anything from the contractors: but we put the position before them every month and remind them of the letter of the agreement.

11. **Coal berths and mechanical appliances.**—*Mr. Elderton.*—The reason why the Beckett plant is being used mainly for manganese ore and only very slightly for coal is one of policy. We thought there might be an increase in coal exports and so we loaded the coal at the coolie berths in order to give the labourers something to do. If we had used No. 20 berth entirely for coal there would have been less work for the coolies and some of the labour force would have been disbanded. With fluctuating exports, it will always be best to do some of the work by hand, and we must give Messrs. Bird & Co. a chance of keeping their labour together. If now there should be an increase in the export of coal we could spare $\frac{1}{3}$ rd of the Beckett plants for coal but there would have to be an increase of at least 500,000 tons before there would be sufficient work to justify our considering the installation of another Beckett plant with tipplers. The capacity of such a plant would be about 600,000 tons a year, and mechanical plant cannot pay unless it is fully employed. The installation of additional plant would increase the charges on all coal exported unless it was kept continually working.

(*Mr. Banerjee's question.*)—*Mr. Elderton.*—It is not correct to say that the wire-ropes on the skips of the Beckett plant are not long enough to reach to the bottom of the hold. I do not know the grounds on which the Indian Mining Federation made the statement. We supply the plant with ropes of adequate length and if any portion of the rope goes wrong we do not cut it but scrap the whole. (*To Mr. Stuart-Williams.*)—The plant has been working for 20 years but I have heard of no complaints on this score until the last few months. We can certainly undertake to ensure that the tubs are lowered to the bottom of the hold.

Mr. Elderton.—I do not understand how any witness could have said that if there was a vessel at each of the coal berths only 500 tons could be loaded per day at each under present conditions. If no additions were made to the present labour force this might be correct, but it would only be necessary to recruit more men.

Mr. Burns.—As regards the number of days taken to load steamers, it must be remembered that the size of the average cargo boat taking coal at Calcutta has increased recently. If you leave out ships taking less than 4,000

tons, then you will find the average running to about 8,000 tons per ship as against 5 to 6 thousand in pre-war times. It now takes eight or nine days to load a ship of that kind. In December out of 17 steamers that loaded coal 10 were large ones such as I have mentioned. They loaded at the rate of 900 tons a day.

Mr. Elderton.—We admit that this is slow work but it is due to supply trouble. The coal comes down neither regularly enough nor quickly enough. To load 1,500 tons a day means that we must have a good wagon supply. I should not admit that this slow work reflects discredit on the port for it is not the fault of the port authorities. But it is probably quite true that the slow loading does affect the ships' willingness to take contracts at Calcutta.

14. Best type of mechanical appliances.—*Mr. Elderton.*—With reference to the suggestion at the end of our reply to this question that a small technical sub-committee should be appointed to investigate the best type of mechanical plant for local conditions, I personally do not consider that any railway representative would be useful on the committee unless he were an Agent or a Member of the Railway Board capable of speaking with authority on the two railway questions which would be of importance namely type of wagon and regularity of wagon supply. My own opinion is that the committee is not needed at present but that it should be appointed before any plant is put in when the time comes to take up this proposal. I agree that it might be useful to have the opinions of the committee on record.

Mr. Elderton.—As regards the general complaint that Calcutta is backward in the provision of mechanical loading appliances for coal, I would say that it is a question of cost. With our conditions of supply, coolies are cheaper than mechanical plant per ton of coal shipped. If more mechanical plant is wanted by the Trade they will have to pay higher charges. It is possible that the advantages they would derive from quicker loading would make it worth their while to pay us more. I should mention that 19 and 20 berths are only partially mechanical. Side-tippers for the wagons would be required to make them really mechanical berths.

Supposing we had no difficulties in regard to the regular arrivals of suitable wagons, the maximum we would handle with one Beckett plant would be 4,500 tons a day. The most that we have ever done with the Beckett plant was 5,100 tons in 27 hours but this was working under pressure and the rate could not be kept up. A conservative rate would be 3,000 tons per day.

Mr. Burns.—We would handle an eight thousand ton steamer in three or four days without any difficulty.

Mr. Elderton.—As regards the rate at which we could load at the coolie berths supposing that we had no difficulties in the supply of wagons, we could manage 1,500 tons at each berth per day. That would give us a total maximum of 16,000 tons per day allowing for the use of 1½rd Beckett plants or over four million tons in the year as contrasted with our pre-war figures of three million tons excluding bunker coal. As regards this figure of three million tons we always quote our figures by financial years, and taking financial years we passed the three million ton mark in 1912-13, 1913-14, and 1920-21. Most of the bunker coal is loaded overside from boats and the Port Commissioners have nothing to do with that. I should like to remark that in our reply to Question 11 we referred to ten coal berths as being in commission: this number is exclusive of the Garden Reach berth. This berth is really a part of the Kidderpore Docks but it is worked by Messrs. Mackinnon, Mackenzie & Co., although the property of the Port Commissioners. Last financial year they handled 338,000 tons of coal, bunker and shipment, and this year their figure will be greater: so Garden Reach handles a very considerable amount of coal. It would not be correct to say that Garden Reach was an addition to the facilities of Calcutta. It is rather an improvement in those facilities. Messrs. Mackinnon, Mackenzie & Co., formerly shipped coal at a private jetty belonging to them known as Brace Bridge Hall jetty, but this jetty was acquired by the Commissioners in connection with the King George's Dock scheme, and the new coal jetty was provided instead.

(To Mr. Bray.)—We keep a permanent staff of coolies for the Beckett plant. It is true that the supply of labour in Calcutta fluctuates, and that at times our labour contractors have had difficulties in recruiting especially in May. In my opinion with the present amount of coal being shipped two mechanical berths are more than sufficient. When exports reach two million tons a year, it will be a question for the trade to decide whether they prefer mechanical loading or coolie loading and whether they are prepared to pay for the former.

Mr. Elderton.—I do not quite know what is meant by the suggestion that there should be a storage bin in Calcutta. There would be no advantage in having such a bin, seeing that we have ground on which to stack, unless the coal is to be loaded by mechanical plant. There is no provision for a storage bin in connection with the mechanical plant that we favour. I may remark that a bin would be useless unless there was pooling and the qualities of Indian coal are so variable that it is hard to see what advantage a bin would offer in Calcutta.

15. **Breakage.**—Mr. Burns.—We do not favour the provision of shoots because they would delay loading. Slower work would result from the necessity of continually shifting the shoot as the coal is heaped up in the hold of the vessel and possibly more trimming would be needed. With coolies throwing the coal straight into the hold a certain amount of trimming can automatically be secured by covering up part of the hatchway at a time. The suggestion that the coal could be trimmed if you had a number of shoots pointing towards different parts of the hold would not solve our difficulty, because you would have to move them fairly often. Something might be done if you had a small shoot with a rotating gear, but that would, I think, entail considerable cost and require frequent adjusting.

Mr. Elderton.—We do not know any type of shoot which seems suitable. That would be a matter which might be taken up by the suggested technical sub-committee.

Mr. Burns.—We did as a matter of fact try shoots in 1910-11, but (to Mr. Bray) I agree that the experiment was not on a proper scale to be decisive.

18. **Variations in charges on coal.** Mr. Elderton.—The figure of -/8/6 shown as received from the trade in 1923-24 includes besides the shipping charge miscellaneous charges for dumping, removals from berth to berth, night work, etc. This figure was obtained by dividing the total receipts by the total tonnage.

20. **Terminals.**—Mr. Elderton.—The reason why we do not include the terminal charges in our statement J is because they are given in a separate statement later (Statement N). It was thought having regard to Questions 17 and 20 that separate statements were required. I think that all the charges on coal should be considered together, and it would have suited my argument to have shown them in one statement.

21. **Possibility of reducing charges.**—Mr. Elderton.—Before the terminal was increased from 2 pies to 4 pies per maund the Port Commissioners' railway work was run at a big loss. The loss is now only slight. Our income from railway work in 1923-24, the last completed financial year, amounted to Rs. 34,69,000, and our revenue expenditure to Rs. 24,53,000, a difference of Rs. 10,16,000. Against this there has to be met the fixed charges on capital expenditure amounting to Rs. 8,49,000 at 6 per cent. on Rs. 141,60,000 and a share of the cost of general control. This share would amount to Rs. 3,60,000 if the total cost was divided in the proportion the revenue expenditure on the railway bears to similar expenditure on other portions of the Commissioners' work. This calculation does not take into account the value of the land used by the railway.

It would be a very complicated matter to divide the railway expenditure up between coal and other commodities at the Docks, but the railway work is cheaper although the same terminal of 4 pies per maund is charged on everything. According to a rough estimate we are making a profit of two

annas a ton out of the terminal on coal. On the other hand shipping is costing us about 11 annas a ton against our receipt of 8 annas per ton, when fixed charges on capital expenditure and overhead expenses are taken into account, so that there is a loss of about 3 annas per ton. It is correct that we also get the river due on coal, but more than half the total river due collected on all goods goes to meet the losses on the Port and Port Approaches Departments where very heavy expenditure is incurred on dredging, lighting and surveying the river. This loss must be put at Rs. 32 lakhs a year including fixed charges on capital, and I estimate the share payable by coal at Rs. 7.4 lakhs whereas it pays river due amounting to Rs. 8.1 lakhs leaving a margin of less than one anna per ton which is insufficient to meet the net loss on railway and shipping apart from a share of the other general expenses of the Port. Coal is now not only giving no profit but it is not really paying its way. In 1912-13 coal was by far our most important export. Now it has lost a lot of its importance.

At Shalimar we only levy two pies per maund on coal which is the same rate as is charged by the Railways at the Howrah depôt. The reason why the rate is less than at the Docks is because the work done there is cheaper and also we have always given preferential treatment to bunker coal at this depôt. We once estimated the cost at 2½ pies per maund, but owing to our not having complete records of the capital expenditure on railway apart from other capital expenditure at Shalimar, we accepted the rate of 2 pies per maund.

If we were presented with a choice between spending 5½ lakhs on improving facilities and now giving a reduction of charges on coal, I would reply that the interest and sinking fund charges on Rs. 5½ lakhs do not amount to half an anna per ton on the coal shipped. In any case we shall not spend the whole Rs. 5½ lakhs on improvements all at once, and a portion of the scheme must be carried out anyhow for the King George's Dock.

(To Mr. Bray).—In working out the amount that coal ought to contribute to the loss on Port and Port Approaches, I based the calculations on tonnage and not on value.

(Mr. Banerjee's question).—The question whether there have been such improvements in the coal dock as to justify the increase in the river dues is hardly a fair one. The river dues are a toll payable by all merchandise for the benefit of the port as a whole; they pay amongst other things for the river facilities which coal enjoys the same as other commodities. We are now doing much more in the way of lighting and dredging the river than we used to do. For example we now have three large dredgers for work in the Port Approaches whereas we only had two before 1919 and one before 1913. The river due on cargo coal is only half what it is on other commodities excepting manganese ore.

(Mr. Banerjee's question).—There is no proposal to have special accommodation in King George's Dock for jute and tea. The dock will be for general goods. We have just decided to revise our charges in order to build up a reserve fund with the hope that no further increase will be needed when King George's Dock is opened. At present we are meeting the interest on the capital cost of the King George's Dock from capital but as soon as the dock opens we must start paying the interest from revenue. The Port Commissioners decided to increase the charges on tea as it is not now paying its fair share, to raise slightly the charges against ships, and to increase the river due by four annas a ton in the case of all imports and exports except coal, manganese ore and possibly pig iron.

(Mr. Banerjee's question).—It is possibly not entirely correct to say that the terminal charges were imposed to meet the cost of the railway system. When the Port Commissioners are short of money (and it must be remembered that they do not work to make any profit) they look round to see where they can raise the extra amount needed with the least inconvenience to trade. They do not necessarily try to make each section of their work self-supporting. I have shown that with the present terminal charges we make no profit. If

three million tons a year of coal were exported I admit we should make a big profit. If we now reduced the charges on coal other trades would have to bear the expense. If a reduction would result in bigger shipments in the future and more total income, it would be good business to make the reduction. It is a point on which the Port Commissioners might think it worth while to gamble.

(*Mr. Banerjee's question.*)—As regards statement “N,” the diminution in the receipts from coal as compared with the receipts from other commodities is due not only to the decrease in the amount of coal shipped but also to increases in other commodities, particularly manganese ore and pig iron. We have doubled the terminals on all commodities. Before 1922, they were 2 pies a maund, as they were on coal also, but then they were put up to 4 pies. The whole of this charge is borne by the Railways as regards other commodities, but the extra two pies on coal they have passed on to the trade.

(*To Mr. Legge.*)—I do not think we can apply the principle of not charging more than traffic can bear to this question of the terminal charges on export coal; in my view we must take the charges on export coal as a whole. We charge coal lower shipping charges and less river due. I think the charge is a bit high if we take the terminal facilities alone into consideration but before reducing it you must consider the other receipts and expenditure. The Railways always used to pay the whole of the terminals. The probable reason why they could not pass on to the trade the extra terminal on other commodities was that competition prevented it. They had to think of the possibility of the commodities going to other ports: as regards coal they thought there was no competition and they could make the trade pay.

The two annas difference in the river due on bunker and cargo coal is a special concession to bunker coal. At one time there was no river due on bunker coal like ships' stores, and when we did impose the charge we made a concession. The charge practically amounts to a charge against the ship. If the river due on cargo coal was brought down to 6 annas a ton we should make no reduction in the charge on bunker coal.

23. Departmental control of labour at docks.—(*Mr. Banerjee's question.*)—It is correct to say that we have recently installed cooly lines at some cost but they are not large enough to house all the labour. Also the last lines built were for No. 1 dock and not for coal labour at all.

(*Mr. Banerjee's question.*)—I would answer the question why we do not resort to mechanical loading if we have trouble with manual labour by saying that we have not much trouble with manual labour: we have occasionally had trouble but on the whole Bird & Co. have done us well.

24. Opening of steamer berths.—We refer to the results of six days' notice as satisfactory because the coal begins to arrive a day or two before the time that the ships are placed at the berth.

Mr. Burns.—This proves that if the despatching and railway arrangements were satisfactory we could get down the coal with no more than six days' notice.

Mr. Elderton.—By opening a berth we mean that railways can book to it.

Mr. Burns.—I do not think that we have given less than six days although the witnesses have referred to 4 days' notice being sometimes given.

Mr. Elderton.—The objection to opening the berths earlier is that some coal would come down too soon and then we should have to hold back wagons or dump, both of which courses are objectionable.

26. Objections to dumping.—We do allow dumping and without charge, and it is not correct to say that we artificially put obstacles in the way of dumping in order to evade our promise not to charge for it. It is a fact that we are not doing as much dumping as we did and our staff, specially the junior members, have a tendency to avoid dumping if they can out of a sense of loyalty to the Commissioners, but whether we should dump or not is purely a matter for us to decide. If we do not dump we run the risk of

demurrage which may be more than the cost of dumping. It makes no difference to the exporter whether we keep the coal in the wagons or on the ground.

The argument of the coal trade is that so long as the wagons are coming down slowly we ought to open stations early and allow coal to be dumped. This is not without justification but in my opinion if we open stations earlier and dump we ought to re-impose the dumping charges, for if we do not there will be always a feeling that we are avoiding dumping in order to save cost.

As to the suggestion that we should reduce the terminals and increase the dumping charges; in the old days we used to dump one third of the coal and that would mean a reduction of one anna a ton on the whole amount; but as wagons are arriving now we would need very much more than one third of the coal on the ground if we were to get quick loading and we do think that it is a bad method of loading and it makes mechanical loading impossible. We could quote cases in which more than one half of the coal was dumped; but usually heavy dumping is due to ships having been delayed.

(*To Mr. Bray.*)—It is not correct to say that we have changed our policy as to the opening of stations since the charges on dumping were removed.

(*Mr. Burns.*)—The decision when stations will be opened is left to the Coal Superintendent, subject to my intervention. It is a thing that is easily checked.

Mr. Elderton.—In the old days there may have been less than six days' notice given when we got short notice of the arrival of the ship.

(*To Mr. Legge.*)—*Mr. Burns.*—As regards the danger that if a preferential wagon supply were given to export coal there might be over-indenting for wagons by the collieries, the Port Commissioners could certainly give the railways information about how much coal was to be loaded on each ship. They did not do this in pre-war days but they did it throughout the war when control was on. The system worked well and practically no surplus came down.

(*To Mr. Legge.*)—*Mr. Elderton.*—As regards the allegation by Mr. Pattinson that there is a continual fight between the Port Commissioners and the shippers as to dumping, I can only say that the allegation is not correct.

27. Coal depots at Howrah and Shalimar.—(*Mr. Banerjee's question.*)—*Mr. Elderton.*—We shall extend the pontoons at the depôt and the gangways out to deeper water. The extension of the sidings will mean a lot of reclamation on the river side, and to push forward the depôts to deep water like this would take a long time. If we buy a new dredger as we are considering it would hasten reclamation. It is quite true that at low water cargo boats have to be put between the shore and the barge which is being loaded. It is a silting shore.

28. Rents charged for coal depôts.—(*Mr. Banerjee's question.*)—Although the statement shows the rates of rent as "since 1912" these rates had been in force since 1908. Although there has been an increase of 150 per cent. in the rates, the value of land elsewhere has increased by more since 1908. It is true that there was a land-boom in 1920, but I do not consider the rates then fixed are now excessive. Also you ought really to take the charges on bunker coal as a whole and bunker coal gets preference: for instance, there is a toll, of previously 2 annas and now 4 annas per ton, on all goods passed over the Commissioners' other inland vessels wharves but we do not charge this toll at Shalimar. Besides that the rent does not merely cover the use of land: we provide landing stages.

As regards the specific cases of excessive increase quoted by the Indian Mining Association, their figures were wrong because they included municipal taxes, both owner's and occupier's, whereas the Port Commissioners pay the owner's share. The maximum increase in rent was 150 per cent. except in the case of Messrs. Mackinnon, Mackenzie & Co.'s depot which was previously held by them on a long lease at lower rates: when this lease fell in they were charged the full current rates and therefore the increase in their case was more than 150 per cent.

We based the increases on market rates. Two or three years ago we had many applicants for these depôts, but I am not certain that we should have them now.

The Port Commissioners have a bunker coal depôt of their own at Shalimar through which we pass about 50,000 tons a year. If we paid rent at the same rates as our tenants the whole rent charge would amount to only 1-8 annas per ton, which is a very small amount for storage. We cannot reduce our terminal charge at Shalimar because costs have gone up and moreover the old rate of one pie a maund did not really cover the cost.

(*To Mr. Bray.*)—I do not agree that the rents are not charged on the correct market value of the land. The fact that we can get tenants at the rates which we fixed shows that they are reasonable. Otherwise people could go elsewhere. It is only right that tenants should pay for the facilities provided at the depôts and for the advantage of being close to shipping.

I cannot say with certainty that Calcutta Property generally has gone up 150 per cent.; but it must be remembered that we are taking present values as against those in 1908 and much of the Commissioners' own property, for instance the Strand Bank lands, has certainly appreciated to that extent. In my opinion, the rates were unduly low in 1908 and so even with the 150 per cent. increase they are not unreasonable now. If the value of land fell, I suppose we should be forced to bring down our rents. As regards the suggestion that the rents were fixed not on the value of the land but in consideration of the Port Commissioners' financial requirements, it is so far correct that at that time the general revision of charges after the war was under consideration and the Port Commissioners laid down that the first step was to get the market value for their land. There is no feature about the coal depôts that enables us to fix the rent at any figure that we please apart from the amenities of the site. I would repeat that the whole rent charge in our own case amounts to less than two annas a ton. (*To Mr. Legge.*)—I point to the fact that the tenants do not go elsewhere to show that our land is worth the rates charged. (*To Sir Rajendra Nath Mookerjee.*)—The increase in rents was the policy of the Commissioners and was not done merely by their executive officers. All these rents were fixed by the Commissioners at a meeting in the first instance and the Commissioners considered the protests which came in afterwards and confirmed the increases. I shall send copies of the correspondence with the Indian Mining Association to the Committee. (*To Mr. Banerjee's question.*)—I am not in favour of the suggestion that every depôt-holder should be given some frontage on the river. In this connection I may say that a lot of coal stored at Shalimar is not bunker coal, but coal for local consumption. I believe that this is largely the case with the tenants of back depôts and that the principal bunker contractors are not now handicapped. If the front depôts were used for purposes other than bunker coal we could turn the tenant out. I believe the genuine bunker contractors would on the whole suffer if every depôt-holder were given some river frontage.

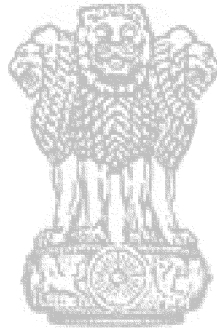
29. Charges on bunker coal loaded from depôts.—In our answer to Question 29, we mean "by charges dealt with above" the terminal of 2 pies per maund mentioned in our answer to Question 20. This terminal is paid to the Commissioners by the Railways but the whole of it is recovered by the latter from the trade. The Railways used to pay us one pie per maund out of their general revenues without charging the trade anything, but when we put our rate up to two pies, they took the opportunity of recovering the whole two pies direct from the coal trade. (*To Mr. Bray.*)—At Kidderpore, the Railways pay us 4 pies per maund of which they recover 2 pies from the trade; at Shalimar they pay us 2 pies per maund and recover 2 pies from the trade.

31. General suggestions.—The whole difficulty is summed up in the words "slow and irregular arrivals of railway wagons."

(*Mr. Banerjee's question.*)—I do not think we rejected the proposal of the Indian Mining Association to have a special watch and ward staff at Shalimar. What I believe happened was that when we unofficially told the Indian Mining Association what the extra cost would be they dropped the

proposal as not being worth the cost. We do not propose to take any steps in this direction, because if we did we should have to increase our rents. The back depot-holders suffer most because there is a large coolie population living near them. The Port Commissioners have durwans there but only to watch their own interests and not to protect the tenants' coal.

Speaking as a landlord in relation to tenants we say that it is the tenants' own business to protect their coal.



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(vi) PORT TRUST, BOMBAY.**WRITTEN STATEMENT.****1. Imports of coal into Bombay port.**—(a) by sea; and (b) by rail.

(a) The information is given in the accompanying Statements I and II.

The figures for country of origin are as follows :—

(i) Imports of Coal by Sea.

Kinds of coal.	1921.	1922.	1923.	1924.
	Tons.	Tons.	Tons.	Tons.
Natal	25,027	63,921	102,515	57,136
Cardiff	82,686	139,028	49,707	19,717
Durban	6,573	37,454	35,451	18,359
Dufferin . . . . .	..	1,505	..	..
English	425	8,907	4,065	294
Bengal	203,117	42,470	48,916	133,550
African . . . . .	..	41,602	78,463	41,948
Witbank . . . . .	..	160	15,186	7,820
Australian	3,571	3,680	15,037	3,458
Javan . . . . .	..	7,234	813	30
Delagoa Bay	15,922	285	..	520
Transvaal . . . . .	..	..	..	22,691
North Country Bunker Coal . . . . .	..	..	1,017	7,439
Scotch . . . . .	..	..	1,423	1,358
TOTAL	397,321	346,246	352,591	314,370
Coke	2,347	4,388	3,364	601

(ii) Exports of Coal.

Nature of coal.	1922.	1923.	1924.
	Tons.	Tons.	Tons.
Bengal coal	41,922	43,365	55,406
Foreign coal	144,411	136,621	118,453
TOTAL	186,333	179,986	173,919

STATEMENT I.

Statement showing the quantities of coal imported by sea into the port of Bombay from foreign countries and Indian ports during each of the last twelve official years from 1912-13 to 1923-24.

Country whence consigned.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Foreign Countries.</i>												
United Kingdom . . .	139,437	134,529	123,284	5,025	1,572	904	1,390	690	6,057	564,150	372,815	45,085
Germany . . .	3,068	690	150	..	..	..	..	..	..	..	..	..
Netherlands . . .	41,766	48,115	18,858	..	..	..	..	..	..	..	..	..
Belgium . . .	2,809	..	..	..	..	..	..	..	..	..	..	..
China (exclusive of Hong-Kong and Macao).	12,250	1,000	1,000	500	..	3	..	..	..	..	..	..
Japan . . .	75,680	62,654	30,895	33	190	8,457	1,313	647	2,650	45,551	28,772	275
Cape Colony . . .	220	..	..	..	..	..	..	..	..	..	..	..
Natal . . .	119,052	95,374	25,751	10,301	12,017	509	17,417	15,517	5,960	311,555	189,952	197,890
Transvaal . . .	55,734	6,004	41,315	24,788	..	..	..	..	..	..	..	..
Portuguese East Africa . .	38,349	66,230	61,921	39,581	6,077	..	32,980	5,274	18,430	132,059	12,597	98,235
Australia (mostly New South Wales).	70,906	25,884	17,116	13,588	12,479	1,346	..	1,694	8,713	62,683	19,689	32,220
Other countries . . .	700	2,605	..	1,645	370	30	90	480	685	100	100	1,367
Total Foreign Countries	559,871	443,085	325,690	95,551	33,305	11,249	53,140	24,252	43,095	1,116,194	630,925	375,092
Indian Ports (chiefly Calcutta)	706,687*	693,122*	608,516	78,333	1,218	719	909	54,906	401,452	348,416	89,289	128,072
Exports of Indian coal for Bunker purposes.	..	..	..	..	..	..	..	481,923	661,832	297,132	90,379	..

* These figures represent imports of coal-coke and patent fuel. Figures of coal are not separately available.

STATEMENT II.

Coal Trade at Ban-lers from 1911-12 to 1920-21.

	IMPORTS.			EXPORTS.			Total Imports and Exports.
	Foreign.	Coasting.	Total.	Foreign.	Coasting.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1911-1912	158,528	382,478	541,006	4,261	84,424	88,685	629,691
1912-1913	265,243	377,051	642,294	474	83,139	83,613	725,907
1913-1914	250,373	405,883	656,256	43	106,029	106,072	762,328
1914-1915	215,217	373,203	588,420	8,333	197,441	205,774	794,194
1915-1916	27,866	80,859	108,725	350	343,868	344,224	452,949
1916-1917	17,515	29,971	47,486	19,092	342,926	362,018	409,504
1917-1918	18,276	54,904	73,180	301	224,403	224,704	297,884
1918-1919	10,403	39,507	49,910	9,060	189,174	198,234	248,144
1919-1920	6,865	47,914	54,779	11,545	377,800	389,345	444,124
1920-1921	27,577	225,032	252,609	1,748	438,213	439,961	692,570

(b) Extract from Railway Manager's report, dated 30th January 1925. I have only got figures for imports of coal by railway since this railway opened and they are as follows:—

	Tons.
1915-16	2,12,000
1916-17	10,78,000
1917-18	11,82,000
1918-19	10,44,000
1919-20	9,36,000
1920-21	5,16,000
1921-22	1,96,000
1922-23	1,17,000
1923-24	1,00,000

“ This does not include coal to the G. I. P. Railway which the Chamber of Commerce say is as follows:—

	Tons.
1920	3,57,000
1921	1,94,000
1922	1,05,000
1923	1,02,000
1924	72,000

2. Discharging and landing of coal.—(a) A ship bunkering coal for import into Bombay generally discharges her freight into lighters in the stream using ship's gear to hoist the coal up from the hold and then tipping it overside into lighters alongside the vessel. In the case of Indian coal it is not customary to weigh but in the case of foreign coal Customs generally require the coal to be weighed in their presence on board the ship. I understand that Customs do not always insist upon such weighment. The method of weighing is by means of filling large iron tubs which are then tipped overside into the lighter, *i.e.*, the actual weight is taken on board the ship and not the lighter.

(b) The lighters, if country craft, sail to the bunders and, if iron barges, are towed.

(c) The unloading and stacking on the bunders is carried out by cooly labour. They carry the coal in baskets on their heads crossing a plank from boat to bunder and dumping on to the stacking ground which is alongside the wharf.

(d) Transporting from the stacking ground on the bunders for local consumption is effected by means of motor lorries and bullock carts. For distances further afield such as Kurla and beyond Kalyan to Ambernath transportation is done by means of lorries and occasionally by railway, depending upon the cost at the time. The coal is usually weighed at the bunders before transport in the manner already indicated, *i.e.*, by means of baskets on a portable scale. As to exports on the bunders for purposes of bunkering, the process is the reverse of importing, the coal being weighed on the bunders instead of on the ship.

3. Improvement of coal handling facilities.—There are no schemes under contemplation having the object of providing mechanical appliances. There is, however, under construction additional storage ground and wharfage in the shape of a new coal bunder.

4. **Charges levied by the Port Commissioners.**—(a) In the docks wharfage charges on coal passing over the wharves were as follows:—

	How charged.	Imports.	Exports.
1912 to 31st March 1917	Per ton .	Re. 0-14-0	Re. 0-14-0 (with Port Trust labour).
	Plus 25 per cent. surtax from	1st April 1915.	
1st April 1917 . . .	Per ton .	Re. 0-8-0	Re. 0-8-0 (without Port Trust labour).
1st January 1922 to date	Per ton .	Re. 1-0-0	Re. 1-0-0 (without Port Trust labour).
	Plus 50 per cent. surtax.		

Note.—No free days are allowed in the case of coal.

(b) No other bulk cargoes are imported and stacked in the docks.

At the bunders the following rates of wharfage have been levied since 1912:—

Up to 30th September 1919 at 1 anna per ton.

From 1st October 1919 to 31st December 1921 at 2 annas per ton.

From 1st January 1922 to date at annas 2 per ton *plus* 50 per cent. Surtax.

5. **Reasons for variations in charges.**—The docks wharfage rates ordinarily include the supply of labour on the wharves; but, as it was decided in 1917 that labour would not be supplied for bulk coal-cargoes, the wharfage rates were materially reduced. The enhancement of the docks wharfage rates from the 1st January 1922 for coal and certain other principal commodities and the imposition of a surtax of 50 per cent. were rendered necessary in order to enable the Trustees to balance their Financial Budget as required under the Port Trust Act.

6. **Cost of landing coal.**—In addition to the wharfage charge (borne by the importer) a ship in stream pays the cost of discharging into lighters about Re. 1 per ton. After this the following costs are borne by the importers:—

(a) For lighterage about 10 annas a ton.

(b) For discharging and stacking at the bunders a further 10 annas per ton.

(c) For cost of tallying on board ship 1 anna per ton.

(d) For cart-transport from Mazagon Coal Bunder to nearest Port Trust Railway Station about 12 annas a ton and proportionately higher for longer distances to mills, etc.

It will be understood that these are average rates and are liable to fluctuation.

7. **Possibility of reduction in Port Commissioners' charges.**—The traffic and revenue to be derived from colliers in the docks does not justify any reduction of the wharfage rates. Except to meet specially emergent conditions such as were experienced in 1921, coal is not a desirable commodity to handle in large quantities in the same dock with general cargo owing to the damage likely to be caused by coal dust, etc. Furthermore the general lay-out of docks for general uses does not ordinarily provide sufficient siding accommodation and the other special plant and arrangements necessary to obtain economical and rapid handling of coal in bulk. Provision of a special Coal Dock in Bombay would probably be more costly than the present bunder system, and it is understood that the reason colliers do not avail themselves of a berth in the docks is because the existing stream and bunder methods are cheaper.

8 and 9. **Labour supply.**—The Port Trust provide no labour for coal and colliers berthed in the docks are required to discharge direct into railway wagons alongside, the ships' agents providing the labour for loading the wagons.

10. **Stacking accommodation.**—There is stacking capacity for 215,298 tons coal at the present time at Mazagon Coal Bunder and Haji Bunder and further stacking capacity of 141,200 tons at the Railway Depot Station. Ground is allotted on application and held on monthly tenancy for which rent is paid whether there is coal on the plot or not. The rent charges since 1912 are as follows; and they were increased for reasons stated in question (5):—

Coal Bunder.

Up to April 1920 Rs. 7 per stick of 500 sq. feet per month.

From May 1920 up to date Rs. 7+10 per cent. per stick of 500 sq. feet per month.

From January 1915 Rs. 10 per stick of 500 sq. feet. per month for 80' strip adjoining Wharf Road.

From May 1920 Rs. 10+10 per cent. per stick of 500 sq. feet per month for 80 feet strip adjoining Wharf Road.

Haji Bunder.

From April 1920 Rs. 10 per stick of 500 sq. feet per mensem

From November 1920 up to date annas 3 per sq. yard per mensem.

Railway Depot Station.

From January 1915 Rs. 7 per stick of 500 sq. feet per mensem.

From May 1920 Rs. 7+10 per cent. per stick of 500 sq. feet per mensem.

From November 1920 up to date at 3 annas per sq. yard per mensem.

11. **Coke.**—The same remarks apply to coke as for coal.

12. **Imports of liquid fuel.**—(a) and (b) The imports and exports of liquid fuel since 1920 were as follows:—

	Imports.	Exports.
	Gallons.	Gallons.
1920-21	24,756,831	2,294,620
1921-22	37,037,378	4,029,075
1922-23	40,070,471	7,829,954
1923-24	54,619,838	11,063,770

No separate record was kept of the quantity of liquid fuel supplied for bunkers; but it may be assumed that the above export-figures represent mainly bunkers.

(c), (d) and (e) Statement shewing the number of vessels (excluding R. I. M. vessels and Men-of-War) burning oil, coal, and oil and coal calling at this port.

	1920-21.	1921-22.	1922-23.	1923-24.	From 1st April 1924 to 31st Dec. 1924.
(c) vessels burning oil only .	122	109	203	221	157
(d) Do. coal only	3,546	3,608	3,571	3,514	2,511
(e) Do. oil and coal.	2	2	1	5	3

Number of vessels burning oil only does not show great increase.

P. R. CADELL, Esq., C.S.I., C.I.E., I.C.S., Chairman, Bombay Port Trust, H. E. LEES, Esq., Controller of Stores, J. R. REYNOLDS, Esq., C.I.E., Railway Manager, C. N. RICH, Esq., Dock Manager, F. H. TAYLOR, Esq., Land Manager.

Oral evidence—February 2nd, 1925.

1. Imports of coal.—*Mr. Cadell.*—The statement put in shows the quantity of coal actually bunkered in Bombay during the last four years. We keep no separate figures for foreign coal bunkered.

Mr. Rich.—The Customs Department may have such figures.

Mr. Cadell.—I think that the figures of "export of foreign coal" would probably represent coal bunkered.

Mr. Taylor.—The figures given for export of foreign coal for past 3 years represent those for the calendar and not the financial year, and hence they will not quite link up with those of previous years which are based on financial years.

Mr. Cadell.—It will be observed that the exports of Indian coal in some years exceed the imports shown. The difference might have come in by railway.

Mr. Taylor.—I am afraid that we cannot give figures showing countries of origin for 1912-13 as we have no longer these records.

It is correct to deduce from the statement that the amount of foreign coal bunkered has gone up and the amount of Indian coal bunkered gone down.

Mr. Cadell.—You will observe that there has been a very large decrease during the last three years.

(The President.)—The point which I wish to clear up is whether there has been a very large decrease in the total amount of coal bunkered during the last three years.)

Mr. Taylor.—During 1920-21 there were a lot of troops ships coming in after the end of the War and that meant an unusual amount of coal being bunkered. Besides that a large number of steamers have been converted to burn oil.

Mr. Rich.—The amount of oil taken in bunkers last year represented the equivalent of 80,000 to 90,000 tons of coal: there were just over 11,000,000 gallons of fuel exported, almost all of which represent bunkers.

Mr. Cadell.—Although the total number of coal burning vessels has not decreased appreciably it must be remembered that very many of these vessels are small. The actual percentage of oil-burning ships visiting Bombay has doubled in the last 3 years.

Mr. Rich.—Also during the last 2 or 3 years there has been a general reduction in the coasting trade; for example, the Bombay Steam Co. has done less business. The general trade depression has left its mark on shipping.

Mr. Cadell.—The trade depression has been very slightly reflected in the figures for steamers visiting Bombay. Perhaps Mr. Rich can say whether there is a growing tendency for ships to bunker elsewhere.

Mr. Rich.—I am afraid that that is not known to us. Bunkering in the docks is free. We do not check it in any way except that we check the number of lighters coming in with coal. This check on lighters is kept because all lighters pay dock dues when in the docks. Almost all general cargo vessels come into the docks to discharge and load, and practically all vessels visiting the docks bunker while in dock. But though most of the bunkering is done whilst the steamer is in dock some is also done in stream. The Australian mail no

longer calls at Bombay, and that means the loss of a certain amount of bunkering. Even the ferry steamer now bunkers chiefly at Aden, because it has no time to bunker at Bombay.

Mr. Cadell.—I do not think that the Government transports would be shown under "R. I. M. vessels or Men of War." They would be included in the general statement of vessels visiting Bombay, if they used the docks.

Mr. Taylor.—I think we must assume that all the coal shown as exported was taken into bunkers in that year: we were not exporting anything because of the coal control.

Mr. Reynolds.—We exported a great deal of coal to Mesopotamia during the War and perhaps these figures reflect it.

Mr. Taylor.—These figures refer to a period after the War.

Mr. Cadell.—However, we may still have been exporting a fair amount to Mesopotamia.*

1. (b) *Mr. Cadell.*—The coal imported by the G. I. P. is presumably the coal that comes by rail, to their own store at Byculla.

Mr. Reynolds.—I think that they have closed their Byculla store now. But there are one or two sidings which they supply in Bombay, for example the Gas Co. They have one or two stations where they may take coal but not very much is coming in now by rail: it would be about 70,000 tons and the Gas Co. must take a certain proportion of it.

Mr. Cadell.—I should mention that in forwarding figures about coal imports the Land Manager stated in his covering letter that they do not include imports by the B. I., the P. & O. or Bombay Steam or those of the Railways at their private wharfs. So our figures are not complete; we have no idea how much is done by the B. I., and P. & O. at their own wharves.

2. **Discharging of coal.**—*Mr. Taylor.*—I do not think that any bunkering is done from steamer to steamer.

Mr. Cadell.—It would be very difficult to arrange because it would depend on the collier being in stream at precisely the right time.

**The following note was subsequently furnished by the Secretary to the Port Trust:—*

Reasons for the large decrease of export coal between the years 1921 and 1922.—In 1921 the Royal Indian Marine shipped 129,697 tons coal which it is believed were supplied to Government Transports. In that year also oil fuel bunkers amounted to 7,900,000 gallons. Calculating 240 gallons of oil to one ton and 5 tons of oil as equivalent in firing value to 9 tons coal, this volume of oil in "coal tons" = $\frac{7,900,000 \times 9}{240 \times 5} = 60,000$ tons.

Thus—	Tons.	Tons.
Export coal in 1921 . . .	= 439,961	
Export coal in 1922 . . .	= 186,333	
Difference . . .		253,628
R. I. M. Special export . . .	- 129,697	
Oil equivalent . . .	- 60,000	
		189,697
	Difference	63,931

This remaining difference is believed to be chiefly attributable to—

- (a) import vessels in 1922 carrying small general cargoes and filling up in Europe with English coal which sufficed for the return voyage. It is known that a number of vessels in the docks transferred coal from cargo holds to bunkers after completion of discharge of general cargo and before loading outwards.
- (b) The study of greater economy in coal on board vessels generally.

Mr. Taylor.—There is not much direct unloading of coal into lorries in Bombay: coal may be unloaded direct into lorries at the docks, but very little is done there. My opinion is that the importers prefer to take their coal from stacks.

Mr. Rich.—Practically no coal at all is now discharged at the docks. In 1922 a considerable number of Clan vessels brought about 300 to 400 tons of coal each, in 1923 one only and in 1924 none. Practically every Clan vessel brings a parcel averaging 200 tons of coke.

Mr. Cadell.—I do not think that anything would come of the suggestion to use Prince's Dock for unloading and Mallet Bunder for stacking: Prince's Dock could not take large colliers, it is an old fashioned dock with an awkward entrance. Mallet Bunder is not very far this side of the present Coal Bunder and it is small: but it is fairly near the Prince's Dock. We could arrange to give up the Prince's Dock for coal, and handle elsewhere the traffic now dealt with in it, but I do not think that it would suit the trade.

Mr. Rich.—Prince's Dock cannot manage ships with an average draught of more than 22'-6" to 23'-0" except at specially high tides: but the shape of the boat and the size of its bilge-keels affect this question of draught; also I should think that the wharves are so narrow that it would be difficult to get the coal away in wagons quickly.

Mr. Reynolds.—There are no lines at Prince's Dock except on the Small jetty, where we could manage to work coal. The Dock was built long before there was any idea of using rails for handling imports. On the east side there are no rails at all.

Mr. Rich.—The jetty is from 30 to 35 feet wide and the outside edge of it is taken up by the dock cranes. Thus there is only room for one line of trucks and they would be in a dead-end. Therefore the turn-round of the wagons would be slow.

Mr. Taylor.—Of the coal bunders, Haji Bunder has rail connections.

Mr. Cadell.—There is room there for coal brought in by private importers. The G. I. P. have taken up their section but the B., B. and C. I. have not taken the section allotted to them. I am informed that the coal importers prefer having their stacks at the other bunder and not at Haji Bunder, because they like being together where there is a market. If they took stacking spaces at Haji Bunder they would not have to sub-lease them from the railway. I do not think that they would be able to land the coal for discharge by the G. I. P. Railway at the G. I. P. Bunder which is intended entirely for the private imports of the Railway. However, there is plenty of room further down. It would be possible to put in railway connection at the Tank Bunder because the railway is quite close, but there has been no demand for it. You may take it that there is no possibility of unloading coal direct into wagons except at the Alexandra Dock. Any proposal to allow for such unloading would necessitate complete remodelling of the Docks. (*To Mr. Wadia.*)—I do not remember any proposal for running a jetty out to the small island near the entrance to the Prince's Dock some 10 or 15 years ago.

Mr. Reynolds.—There was such a scheme.

Mr. Cadell.—If big vessels were to come alongside such a jetty it would mean a tremendous amount of work in constructing the jetty.

(*Mr. Wadia.*—That scheme was intended to provide for coal only.)

3. Improvement of coal-handling facilities.—*Mr. Lees.*—In 1912 or 1913 an attempt was made in Bombay to introduce the same sort of coal-discharging machinery as is used at Rotterdam. There was a lifting grab on a pontoon which came alongside the ship and discharged from it into barges which lay outside. It picked up the coal, discharged it into a hopper with a weighing attachment, and this again discharged it into the barge. I was then on the G. I. P. Railway and was put on to report about it. A trial was made of a consignment of coal for the G. I. P. on a guarantee from the man who was attempting to get the machine introduced that he would make good any loss over 1 per cent. I had to condemn the machine as the loss went up as high

as 5 per cent. The reason why it was not as successful in Bombay as it was at Rotterdam was that it could not get smooth water to work in. Eventually the man concerned had to pack up and remove the machine.

4. Charges levied by Port Commissioners.—*Mr. Cadell.*—I think that the charge of Rs. 1-8-0 at the docks has proved prohibitive.

Mr. Rich.—Coal is the only bulk import trade that we have here. The only thing that we can compare it with is manganese which is exported in bulk. The amount charged on that is 15 annas a ton including surtax.

Mr. Cadell.—Rs. 1-8-0 is certainly heavy. It was fixed at that amount before my time. Before 1917 the charge was 14 annas including labour. After 1917 it went down to 8 annas excluding labour. Then when the docks were in need of money it was raised to Re. 1, and there was a 50 per cent. increase in January 1922 when the same increase was made all round. We are not fond of coal but the object of this charge was undoubtedly to raise revenue and not to penalise imports. We generally leave rates as they are until complaints come in, but here there were no complaints and imports merely ceased; so we may presume not so much that the charge killed the trade as that the importers preferred the cheaper method of lighterage.

Mr. Rich.—The importers went back to working in stream as soon as they could get lighters for the purpose.

Mr. Taylor.—If the coal was unloaded in the docks into wagons it would avoid the lighterage charge but it would have to pay railway freight.

Mr. Reynolds.—The coal freight from docks to dépôt at the existing rate is Rs. 14 per wagon of 20 tons. That is the general rate for all merchandise and does not include loading or unloading; it was not a rate quoted specially for coal.

Mr. Cadell.—Undoubtedly to land coal at the bunder is much the cheaper method. Our answer to Question 6 shows what other charges are levied besides wharfage.

Mr. Reynolds.—In any case a lot of coal even if landed at the docks would have to come up to the bunder for rebunkering, and there is no rail connection to the bunder.

Mr. Rich.—When a ship unloads coal at the docks you must remember the coal would have to bear the cost of shipping-dues which it escapes if it is unloaded in stream. These dues amount to 4½ pies including surtax per registered ton. A collier carrying a cargo of 6,000 or 7,000 tons of coal would pay about Rs. 75 to Rs. 120 including surtax per day.

To show the comparative cost of landing at the docks and landing at the bunder, Statement A. was subsequently put in.

Mr. Taylor. The ship pays the cost of discharging into lighters. The number of coal-dépôt holders is about two dozen.

A complete list was subsequently furnished to the Committee, vide Statement D.

Mr. Cadell.—My general view would be that the Port Trust want to make every branch pay and it is willing to provide facilities at a rate which is just sufficient to cover expenses. But no complaints have been received since I came here, and so if our methods can be described as primitive it is probably because it suits the trade to have them so.

Licensed weighers.—*Mr. Cadell.*—The idea of having licensed weighers is one that has been recently put forward. I suppose that the object of it is to provide trustworthy people whose report as to weights may be accepted by both the buyer and the seller, but whether that would be the result is not at all certain.

Mr. Taylor.—At present weighment is done by the coal merchants, who import the coal, on the bunders unless this is actually weighed on boardship when this is carried out by the shippers, the buyers usually having a Tally man present. One method is actually to weigh the coal. Indian coal is not usually weighed. Foreign coal is supposed to be weighed for customs purposes, but

often the customs-officials are satisfied without actual weighment. The reason for weighing it on board the ship is that it can get a rebate of the Imperial Customs-dues if it is re-exported after weighment. At the bunders it is usually weighed in baskets, five at a time, when it is removed. Another method is to tally baskets taking 40 to the ton, as is often done when selling the coal locally. The third method is only applicable when the coal is handled in iron barges, and that is to ascertain the capacity of the barge and then calculate the weight of the coal in it. There are very few iron barges in Bombay and most of the coal is landed in country craft which are difficult to measure. The licensed weighers would for export-coal work on the bunder and for import-coal on the ship. It would be necessary to have efficient supervision during transit from ship to bunder and *vice versa* or else further weighment may be necessary especially for export.

Mr. Cadell.—We have nothing of that sort for any other trade, and we would much rather avoid it in the case of coal. It is really more the business of the Chamber of Commerce.

Mr. Rich.—In the docks we do however do some weighment when there is a dispute. But that is only on rare occasions.

Mr. Taylor.—(To *Mr. Whitworth.*)—Coal coming from Calcutta by sea is weighed if at all either on board the ship or, by arrangement, on the bunder. I have seen the latter being done. We have shown 1-anna a ton for tallying in our statement, because, when coal is weighed in the steamer, the merchant has his own tallyman; the cost of employing him works out at one anna. The coal-weighment is done by the stevedores paid by the shipper. I think the c.i.f. prices here would include the cost of weighing; I imagine they include all charges up to the time when coal is placed into the lighters.

(To *Mr. Legge.*)—*Mr. Reynolds.*—We charge Rs. 5 per wagon on coal brought into our junction by the G. I. P. Railway. That would be a terminal charge rather than a haulage charge. But it is a charge made on freight generally and not only on coal. It is not made on grain or seeds, and at present not on most cotton. Manganese pays a smaller charge of Rs. 2 because the exporters have complained that it cannot bear the charge of Rs. 5.

Mr. Cadell.—The real reason why we have brought down this charge for Manganese is that there is keen competition between Bombay and Calcutta about Manganese.

Mr. Reynolds.—It is a fixed rate whatever the size of the wagon. We do not charge any tonnage rates, and so I do not know what chance there would be of charging by the ton instead of by the wagon. I may mention that as regards haulage of local coal we have really no suitable wagons for the purpose because we have never had any such traffic.

Municipal tax on coal.—*Mr. Cadell.*—I do not know whether such a tax is going to be imposed. They have proposed a tax on a great many commodities. We would resist this, because it represents a tax on transit.

Mr. Reynolds.—Whether we would welcome the import of coal by rail rather than by sea depends on what the G. I. P. Railway would think.

Mr. Cadell.—We prefer it to come by sea, if we are given any choice. It is conceivable that when the new docks come on we may have special coal berths, but that is very much a question of the future.

Consumption and purchase of coal by the Port Trust.—*Mr. Lees.*—We use 50,000 tons of coal a year for general purposes and from 10,000 to 17,000 tons for our Railway, or a total of 60,000 to 67,000 tons. Our purchase is by tender. We advertise our requirements in two Calcutta papers, in the "Pioneer" and in the Bombay papers. The last tenders are now in the hands of the Board: they came in on the 14th January. We do not get tenders from the collieries. Our trouble has been over unreliable coal and so we insist now on purchasing on a test in Bombay. The test is analysis, and we send the coal either to our own Mechanical Superintendent or to a

public analyst. We see to the ash, the calorific value, and the evaporative power. In our contracts we get a guarantee based on calorific power.

For the last 8 years we have been buying through the Chief Mining Engineer who had been fixing things up for us. The contracts as arranged by him gave us no remedy: when the coal was bad and we complained, it would improve for a time, and then invariably fall off again. To show what difference there was in the coal supplied, I would say that one consignment on test showed an evaporative power of 14 lbs. while the next showed an evaporative power of only 10 lbs. Our method of purchase amounts to buying on analysis in Bombay. We allow a margin of 500 calories. For instance if we fix a maximum for 1st class coal at 7,000 calories, we take 1 per cent. off the price for every drop of 100 calories until the figure reaches 6,500 when we would reject the whole consignment. We carry out the tests ourselves and if a report turns out unsatisfactory we will call in a public analyst to check it in order to afford reasonable protection to the sellers. The Improvement Trust and the Municipality are both now buying on these lines. I re-drafted our whole method of purchase this year in order to protect the Trust from variations in quality.

(*To Mr. Whitworth.*)—The Municipality employs an analyst who has made analyses of Bengal coal for the last 18 months, and I understand that the quality has been fairly consistent. I do not know if they have called for any reduction in the price as a result of their analysis. I hear that the collieries fought shy of my recent tender, the terms being considered to be too stiff. When I called for tenders I expected to have had at least 25 submitted as over 60 forms were sold, but actually 11 only came in. The Calcutta firms who are represented here work through local Agents. The tender which I have recommended to the Board is indirectly by a very big firm.

Ash-content is limited by a figure shewn in a clause of the contract. Payment however is on calories, and, if the calories are all right, we might accept the consignment even if the ash-content were in excess so long as the difference is small. But if the ash-content were altogether excessive, we would reject the whole consignment under the clause in our contract.

As regards the difficulty explained by Mr. Whitworth as to the seams of Bengal coal being of varying quality so that the coal is likely to be misrepresented if sampling is done carelessly, we should have to be fairly liberal as regards ash. I am quite willing to report the results. On the lines on which we have been going this year, we should be fairly successful in stabilising quality. We have told the merchants that with us it is a question not merely of cutting rates but of quality. When we have heavy and expensive plant working out at sea, we must have reliable coal.

The forthcoming contract will be based on a calorific value of 7,300 to 6,800 as tendered. On several tests we found that the Gopali Chuck and Standard coal used to give very good results. Then in 1920 the Chief Mining Engineer said that it was impossible to get first-class coal to meet our small requirements, and since then the quality of the coal has been very variable. We do not think that a certificate mentioning the mine and the seam and stating what is the normal analysis of the seam would be of much use. We propose to analyse exactly what comes in. We have all along been paying the Chief Mining Engineer 9-pies per ton to examine the coal but that has proved no safeguard as regards either quality or composition. To say that the coal comes from the right colliery would not help us; for example, we bought coal from Titturia which was supposed to be 15 seam, but the evaporative power was sometimes 13 and sometimes 10. The quantity of coal being supplied from Bhulan-Bararee was so small that its quality did not materially affect us; it was probably mixed with other coal.

I may mention also that recently weights have not been satisfactory. I have taken out a statement which shows that the weights vary up to a ton and a quarter less per wagon. So we insist on weighment here.

(*Mr. Whitworth.*)—You will find that this is due to pilferage on the railway. It is the same all over India.)

Mr. Lees.—The last contract that we had for coal coming in by sea was with H. V. Low & Co., in 1915: after that coal had to come in by rail because all the steamers had been commandeered. Now the sea-borne coal is cutting out the rail-borne coal by Rs. 3 or 4 per ton. One firm quoted 4 coals by sea at Rs. 20-8-0, and the same coals by rail at Rs. 25-4-0. So now it will pay us to get coal by sea. The conditions of delivery in the recent tenders were the same; coal had to be weighed *ex-wagon* or *ex-ship*.

We do not burn Welsh coal, because it requires competent firing which is not given by native stokers. We could have bought an English coal, West Hartley, at Rs. 23-0-0 per ton. The price quoted for Natal coal (a mixture of 4 coals probably) was Rs. 20-8-0 and that for Witbank Rs. 23, but we do not want Transvaal coal as it is known to be inferior to Natal. We have not tried Witbank for the Port Trustees, but we have tried Natal coal and found that it does not beat high-class Bengal coal. The Natal mixture to which I referred shows lower calorific powers than the two really first class Bengal coals which I have recommended to the Trustees. The price which I recommended was Rs. 21, and the coal is Victoria and Baraboni.

Mr. Cadell.—Messrs. Andrew Yule quoted a very low rate, but they raised objections to the conditions that sale should be on guarantee of calorific value.

Mr. Lees.—Our Mechanical Superintendent is not keen on getting coals from a number of different collieries concurrently because he prefers uniformity. We tried to get our coal from one colliery but I have had to recommend two. Practically all the other tenders were for coal from a group of collieries. What we aim at is to take our supply from one or two collieries at the outside.

I think that purchase on analysis was started by the Municipality, and the Improvement Trust followed suit. The clauses in their contract are practically the same as in mine. Last year their contractor was Hiralal Himatlal.

We tested Natal coal in 1923, and were told by our Mechanical Superintendent that it did not beat the best Bengal coal, by which I mean the average first class coal such as we have occasionally received. It was an extensive test as we got 2,000 tons. The calories worked about 7,000 or a bit less and certainly did not amount to 7,400 or 7,500. You can take it from me that good Bengal coal for our work is better than Natal, but Natal coal is beautifully clean and it beats Calcutta loading: it is all coal, *i.e.*, has no appreciable slack; it is a nice crisp looking coal and probably this is due to the coal having been washed. It would be a great help if Bengal coal were sent round in that condition. If you noticed the stacks on the bunder you would have seen Bengal coal of which probably much more than 15 per cent. could have been taken out as slack if the coal had been screened.

The contractor is bound to provide coal from the collieries named. As regards check we know there is a reputable firm behind him, and besides that we can always see the Bill of Lading, and I presume if we like we can easily follow the coal back further. If we got a superlative coal, we might be blind and not suspect the substitution of coal from another source, but that is not likely to happen, I think, when dealing with the reputable firm which will supply us.

High class Bengal coal has better test figures than Natal coal even on the latter's published figures, but West Hartley coal analysis is well over 8,000 calories, and if the margin in price were not much it would pay us to take this more expensive coal and burn less of it.

Mr. Cadell.—Apart from Mr. Lees' views, there is the point that the Trustees would give preference to Bengal coal unless the differences against it were very great indeed.

Mr. Lees subsequently put in a summary of tenders which is printed as Statement E.

STATEMENT A.

Comparative Statement of Cost of Discharge of Colliers in Dock 1921, compared with 1923.

Vessel.	Net Revd. Tonnage.	Days in Dock.	CHARGES BILLED TO SHIP.						CHARGES ON CARGO.				GRAND TOTAL.
			Dock Dues at 2 pias per ton.	Craneage.	Night and Sub- day.	Hire of Tubs.	Surfax.	TOTAL.	Quantity.	Wharfage at 8 ams. per ton.	Surfax.	TOTAL.	
			Rs. A. P.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.	Tons Cwts.	Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.
Way Valley	2,410	7	175 11 8	390	150	60	...	775 11 8	5,450 0	2,725 0 0	..	2,725 0 0	3,500 11 8
Clearway	2,417	8	201 6 8	381	150	88	...	670 6 8	5,413 0	2,706 8 0	..	2,706 8 0	3,376 14 8
Mennon	3,019	10	314 7 8	450	150	20	...	784 7 8	6,493 11	3,246 12 4	..	3,246 12 4	4,031 4 0
TOTAL	7,846	25	691 10 0	1,221	450	168	...	2,230 10 0	17,356 11	8,678 4 4	..	8,678 4 4	10,908 14 4

Equal to '62 or Rs. 0-10-0 per ton of cargo

Comparison with Scale in 1923, when Dock Dues were raised to 4½ pias per ton and Wharfage to Rs. 1-8-0 per ton—both including Surfax.

Vessel.	Net Revd. Tonnage.	Days in Dock.	CHARGES BILLED TO SHIP.						CHARGES ON CARGO.				GRAND TOTAL.
			Dock Dues at 2 pias per ton.	Craneage.	Night and Sub- day.	Hire of Tubs.	Surfax.	TOTAL.	Quantity.	Wharfage at 8 ams. per ton.	Surfax.	TOTAL.	
			3 pias.	Same.	Same.	Same.	50 per cent.	Re. 1 per ton.	50 per cent.	Re. 1 per ton.	50 per cent.	Re. 1 per ton.	
Way Valley	2,410	7	263 9 6	390	150	60	431 12 9	1,295 4 3	5,450 0	5,450 0 0	2,725 0 0	8,175 0 0	9,470 6 3
Clearway	2,417	8	302 2 0	381	150	88	385 9 0	1,156 11 0	5,413 0	5,413 0 0	2,706 8 0	8,119 8 0	9,276 3 0
Mennon	3,019	10	471 11 6	450	150	20	470 13 9	1,412 9 3	6,493 11	6,493 8 8	3,246 12 4	9,740 5 0	11,552 14 3
TOTAL	7,846	25	1,037 7 0	1,221	450	168	1,288 3 6	3,864 10 6	17,356 11	17,356 8 8	8,678 4 4	26,034 13 0	29,809 7 6

Equal to 1-72 or Rs. 1-11-6 per ton of cargo

STATEMENT B.

Imports of Coal into Bombay by Sea.

Kinds of Coal.	Year 1921.	1922.	1923.	1924.
	Tons.	Tons.	Tons.	Tons.
Natal	25,027	63,921	102,515	57,136
Cardiff	82,686	139,028	49,705	19,717
Durban	6,573	37,454	35,451	18,359
Dufferin . . . . .	..	1,505	..	..
English	425	8,907	4,065	294
Bengal	263,117	42,470	48,916	133,550
African . . . . .	..	41,602	78,463	41,948
Witbank . . . . .	..	160	15,186	7,820
Australian	3,571	3,680	15,037	3,458
Japanese . . . . .	..	7,234	813	80
Delagoa Bay	15,922	285	..	520
Transvaal . . . . .	..	..	..	22,691
North Country Bunker Coal . . . . .	..	..	1,017	7,439
Scotch . . . . .	..	..	1,423	1,358
TOTAL	397,321	346,246	352,591	314,370
Coke	2,347	4,388	3,364	601

Exports of Coal from Bombay.

Nature of Coal.	From 1-4-1921 to 31-12- 1921.	Year 1922.	1923.	1924.
	Tons.	Tons.	Tons.	Tons.
Bengal Coal	167,128	41,922	43,365	55,466
Foreign Coal		144,411	136,621	118,453
TOTAL	167,128	186,333	179,986	173,919

NOTE.—With reference to the oral evidence, it was subsequently noted that about half of the seaborne coal imported over the Bunders is afterwards exported.

STATEMENT C.

Coal Trade at Bunders from 1911-12 to 1920-21.

	IMPORTS.			EXPORTS.			Total Imports and Exports.
	Foreign.	Coasting.	Total.	Foreign.	Coasting.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1911-1912	158,528	382,478	541,006	4,261	84,424	88,685	629,691
1912-1913	265,243	377,051	642,294	474	83,139	83,613	725,907
1913-1914	250,373	405,883	656,256	43	106,029	106,072	762,328
1914-1915	215,217	373,203	588,420	8,333	197,441	205,774	794,194
1915-1916	27,866	80,859	108,725	356	343,868	344,224	452,949
1916-1917	17,515	29,971	47,486	19,092	342,926	362,018	409,504
1917-1918	18,276	54,904	73,180	301	224,403	224,704	297,884
1918-1919	10,403	39,507	49,910	9,060	189,174	198,234	248,144
1919-1920	6,865	47,914	54,779	11,545	377,800	389,345	444,124
1920-1921	27,577	225,032	252,609	1,748	438,213	439,961	692,570

STATEMENT D.

1. Names of Coal Merchants at Coal Bunder.

The British India Steam Navigation Co.

Messrs. J. F. Karaka & Co.

„ Chunilal Harilal & Co.

„ Andrew Yule & Co.

Mr. K. C. Shroff.

Messrs. Visram Bros.

The Bombay Steam Navigation Co., Ltd.

Messrs. P. Nusserwanji & Co.

„ K. Worah & Co.

„ Turner, Morrison & Co.

„ Cowasji Framji & Co.

„ N. R. Nazir & Sons.

The Eastern Bunkerers Ltd.

Messrs. Nanavati Vovaina & Co.

„ Allarakhia Hassam & Co.

„ Cory Bros.

„ S. D. Shethia & Co.

„ Divekar & Co.

„ Ardeshir Muncherji & Sons.

The Mitsui Bussan Kaisha Ltd.

Messrs. Lalji Ghellabhai & Co.

Ahmed Haji Mahomed.

M. N. Marshall.

Messrs. Vassanji Valabji & Co.

„ Ghandi & Co.

**2. Names of Coal Merchant at Railway Depot.**

Messrs. M. Howlden & Co.

„ Gordan & Co.

„ S. C. Cambatta & Co.

„ Keshowji Bhimji & Co.

The Upper Kanara South India Coal Co.

Messrs. J. Shamji & Co.

„ Surda & Sons.

STATEMENT E.

Summary of Tenders for Port Trust 1st Class Steam Coal requirements for 1925-26 (50,000 Tons).

Price per ton.	Class of coal.	Whether delivered by sea or rail.	Maximum calories guaranteed.
Rs. A. P.			
18 0 0	First Class Jharia	Steamer	6,900
18 11 0	Do. Bengal	Do	7,001
19 0 0	Damagurria 1st Class	Do.	7,000
20 8 0	Natal Coal	Do.	7,000
20 8 0	Deshurghur Seam Coal	Do.	7,000
20 8 0	Murilidih (1st Class)	Do.	Nil.
20 8 0	Bhatdee do.	Do.	Nil.
20 8 0	Chanch do.	Do.	Nil.
20 8 0	Koithi do.	Do.	Nil.
20 8 0	Deshurghur Seam Coal	Do.	6,900
21 0 0	Desh : Seebpore Ponati	Do.	Nil.
21 0 0	Victoria and Barabani	Do.	7,297
21 8 0	Villiers 1st Class Jharia	Do.	6,600
22 0 0	Jharia and Ranegunge	Do.	6,700
23 0 0	Withank (Transvaal)	Do.	Nil.
23 0 0	West Hartley (North of England)	Do.	Nil.
23 8 0	Do. Do.	Do.	7,800
23 14 0	1st Class Jharia	Rail	7,264
24 8 0	Lodna	Rail N. P.	Nil.
25 0 0	Natal Coal	Steamer	7,000
25 2 0	Lodna	Rail S. P.	Nil.
25 4 0	Murilidih	Rail	Nil.
25 4 0	Bhatdi	Do.	Nil.
25 4 0	Chanch	Do.	Nil.
25 4 0	Koithi	Do.	Nil.
25 6 0	Kurharbarhi (Giridih)	Do.	Nil.
25 8 0	Sripore bottom seam	Rail N. P.	Nil.
26 2 0	Do.	Do. S. P.	Nil.
26 4 0	Deshurghur	Do.	Nil.
26 4 0	Seebpore	Do.	Nil.
26 4 0	Ponati	Do.	Nil.
28 0 0	West Hartley	Steamer	7,600

(vii) PORT TRUST, KARACHI.

WRITTEN STATEMENT IN REPLY TO THE GENERAL QUESTIONNAIRE.

E. Comparative merits and prices of Indian and other Coals.

18. **Comparative merits.**—The Chief Engineer reports that Indian coal was used by the Port Trust from 1908-1921, chiefly because it was cheaper than other coal and during the war other coal was unobtainable. When the price of English and other coals approached that of Indian, consideration was given to the relative values of the different coals tendered for and in every case since 1922 British and South African coals have been selected.

It has been found from experience on regular steaming at the same I. H. P. that the consumption of Indian coal is as much as 30 per cent. over Welsh, 28 per cent. over North County and 18 per cent. over South African coals and gives more irregular steaming.

20. **Prices.**—The latest rates quoted in Karachi for December shipment were:—

- (1) Bengal coal at Rs. 19-2 per ton c.i.f. Karachi.
- (2) South African, Natal and Transvaal coal at Rs. 18-8 per ton c.i.f. Karachi plus annas 8 per ton customs duty, i.e., Rs. 19 per ton.
- (3) English coal at Rs. 20-12-5½ per ton at 1s. 6d. per rupee c.i.f. plus annas 8 per ton customs duty, i.e., Rs. 21-4-5½ per ton.

21. **How competition can be met.**—By supplying coal of a good even grade at lower rates than South African.

F. Grading, inspection and certification of coal.

24 to 31. **Grading, etc.**—I am generally in favour of grading, inspection and certification of coal and consider that the agency should be Government as is done in South Africa.

What the buyer requires is knowledge of the quality of the coal he is buying so that it can be compared price for quality with other coals.

WRITTEN STATEMENT IN REPLY TO THE SPECIAL QUESTIONNAIRE.

1. **Imports of coal.**—(a) A statement showing the total imports of coal and coke by sea and landed at the wharves for the years 1912-13 to 1923-24 is attached (Appendix A).

Figures of coal landed at Baba and Bunker Islands are not available.

Similarly figures for the Railway Wharf prior to 1921-22 are also not available.

(b) The figures of imports of coal by rail and bunker coal are not available and the figures for each country of origin are also not available.

2. **Discharging of coal.**—(b) Coal at the wharves is discharged with the aid of coal tubs and loaded into wagons which are railed to their destination. Coal is also discharged overside into lighters which are taken to Baba Island where it is stored by the consignees who have plots there on rent from the Port Trust and the Municipality.

3. **Mechanical appliances.**—No schemes are in contemplation at present. The question of the provision of mechanical appliances was considered some time back and it was decided to carry on with coolie labour so long as it is available in sufficient quantity and at reasonable prices. The time may eventually come when the cost of manual labour will make it imperative to adopt mechanical devices, but that time seems much too far distant to justify any present expenditure in anticipating its arrival.

4 and 5. **Charges levied by the Port Trust on coal.**—A statement (Appendix B) is attached giving the charges on coal and ores levied in Karachi since 1912 with reasons for the variations.

Oil is the only other cargo handled in bulk and the charges levied on it cannot for obvious reasons be compared with those on coal or ores.

6. **Other charges paid by coal.**—If coal is landed on the wharves, no other charges except the Port Trust wharfage fees are incurred but, if it is landed at the Railway wharf, charges for coolie labour and Railway haulage are paid by the consignee.

7. **Possibility of reduction in Port Commissioners' charges.**—There is no likelihood of any reduction.

8. **Labour Supply.**—The labour supply is controlled by the contractors.

9. **Alteration in system of labour supply.**—We have no opinion as to the effect of an alteration in the system on the efficiency of the labour supply.

10. **Stacking accommodation.** A statement (Appendix C) is attached.

The coal merchants also hold areas at Baba Island rented from the Municipality.

No principles are laid down for the allotment of the areas on Port Trust premises.

The rents are fixed according to the locality.

In the case of 1 and 2 the Port Trust have prepared the sites, etc.

In the case of 3 and 4 lessees have reclaimed the land themselves.

In the case of No. 5 the lessees paid half the cost of providing facilities to the site, viz., Railway lines, etc.

11. **Coke.**—Coke is dealt with in the same way as coal.

12. **Oil fuel.**—(a) A statement (Appendix D) is attached

(b), (c), (d) and (e) Information is not available.

APPENDIX A.

Total imports of coal and coke by sea for the years 1912-13 to 1923-24.

(Vide Question 1.)

Year.	COAL.		COKE.
	Keamari Wharf.	Ry. Wharf.	Keamari Wharf.
1912-13	352,041	..	5,673
1913-14	461,461	..	22,006
1914-15	279,565	..	10,483
1915-16	10,996	..	1,087
1916-17 . . . . .	..	..	4
1917-18 . . . . .	..	..	..
1918-19 . . . . .	..	..	..
1919-20 . . . . .	..	..	56
1920-21	55,880	..	83
1921-22	417,262	591	201
1922-23	267,360	1,135	658
1923-24	9,198	105	146

APPENDIX B.
Wharfage charges on coal and ores since 1912.
Vide Questions 4 and 5.

	1912. per ton.	1912.	1914 per ton.	1915 to 1918.	1919 per ton.	1920 per ton.	1921.	1922 per ton.	1923.	1924.
COAL.										
<i>Landing or Shipping.</i>										
Ship Wharves--										
Import	0 14 0		Import or Export 0 10 0		Surcharge of 25% imposed	Surcharge increased to 33½%		Import or Export 1 2 0		
Export	0 10 0									
Other Bandars--			Import or Export 0 2 0					Import or Export 0 0 0		
Import	0 4 0							N. W. Ry. Coal discharged into		
Export	0 2 0							Open stock 1 2 0		
Coal from Rube Island and Coal Depots.								Covered stock 1 6 0		
Ship Wharves--			0 10 0	No change			No change	1 2 0	No change	No change
Import	0 11 0									
Other Bandars--			0 0 2 0					0 6 0		
Import	0 3 0							Free		
Export	Free									
Reasons for increase or decrease			Reduced at the request of the Coal Firms.			To meet the increased cost on account of rise in the price of stores, wages, etc.		To recoup the enhanced haulage charges levied by the Railway and the increased cost of Establishment, etc. Surcharge abolished.		
ORES.										
Ship Wharves	1 8 0		0 12 0		Sur-charge of 25%	Sur-charge increased to 33½%		1-4-0 Surcharge abolished. No change.		0 8 0
Other Bandars	0 8 0				Same reasons as above.			Same reasons as above		
	Same charges as for metals.		Lower rate fixed as ores are of less value than metals and to assimilate the charges to those of Bombay.							Surcharge abolished. Same reasons as for the year 1922.

APPENDIX C.

Statement showing stacking accommodation for the storage of coal.

(Vide Question 10.)

Name of Importers.	Situation.	Area sq. yds.	Date of allotment.	Rent.	Period of lease.
				Rs.	
Mackinnon Mackenzie & Co., Agents, B. I. S. N. Co., Ltd.	Bunker Island .	4,667	1-4-09 .	143 P. M.	No lease.
	Do. .	7,000	18-0-95 .	308 „	Do.
Forbes Forbes Campbell & Co.	Bunker Island	3,111	1-2-15 .	165 „	10 years.
Cowasjee & Sons . .	Baba Island . .	2,650	1-7-21 .	331-4 P. A.	10 years.
Edulji Dinshaw . .	Do. . .	2,591½	1-12-21 .	324 „	10 years.
Cowasjee & Sons . .	West Wharf . .	7,514	1-4-23 .	469-10 P. M.	3 years.

APPENDIX D.

Imports of Liquid Fuel.

Year.	Gallons.
1920-21	21,770,543
1921-22	14,874,157
1922-23	18,097,555
1923-24	21,323,235

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J. B. S. THUBRON, Esq., C.I.E., Chairman, Port Trust, Karachi.

(Oral evidence—February 9th, 1925.)

1. Imports of coal into Karachi.—The noticeable increase in 1921-22 was probably due to imports for the North Western Railway: and the falling off in 1923-24, I should think, was due to the conversion of all their engines to burn oil. I am not positive that the decrease in imports was due to the conversion of North Western Railway engines to oil-burning: the North Western Railway may tell you that it pays nowadays to bring coal across by rail to other centres: certainly this section of their line is almost entirely oil-burning. Imports on Government account are practically all for the Railway, except that there is a certain amount of admiralty coal landed on the Island. But our figures are not so good as those to be obtained from the Collector of Customs, which would be more accurate. We do not keep statistics.

The 9,198 tons shown by us for 1923-24 passed over our wharves, and was practically all our coal: the rest of the imports went to Baba and Bunker Islands.

Practically all coal now coming into the Port goes to Baba or Bunker Island and is used for bunkering except what we use ourselves. We use perhaps 2,000 tons a month but the amount varies: some of this is landed at Bunker Island, some at Manora, and some at the Hydraulic station.

2. (b) Discharging of coal.—The discharge of coal at the wharves has practically ceased: we have described the method which we are prepared to follow and for which we levy our charge.

3. Mechanical appliances.—With the decrease in imports of coal, the idea of providing mechanical appliances of any kind has receded even further into the future. The Sukkur Barrage will lead to imports of coal but only temporarily. Cowasjee has, I think, the contract for South African coal: and it will all come over the wharves.

4 and 5. Charges.—I shall have Appendix B to our written reply retyped so as to make it more clear exactly what rates are charged for import and export. Bunkering is free now.

(To Mr. Legge.)—I do not think that any one would unload coal at the wharf for commercial use: it would come too expensive that way. Local purchases are brought to the old wharf or the jetty, and are thence carted to the town: but very little is used locally.

In 1912 the charge was 14 annas on imports and 10 annas on exports. Actually there were no exports except during the war: the 10 annas would have been payable on any bunkering from anywhere on the mainland but no such bunkering was ever done. Bunkering was done from Baba Island and Coal depôts and was free.

“Other bandars” under landing and shipping in Appendix B refers to the Railway wharf.

Now all our charges are for both import and export: as regards any coal passing over the ship wharves whether inwards or outwards the charge would be Rs. 1-2-0.

The reason for the different charge on North Western Railway coal discharged into open and covered stock is that they used to provide covered wagons which could only be loaded if we used shoots: so, to induce them to provide more open wagons we increased the rate on covered wagons. None the less they still gave us a lot of covered stock, with which it was an awkward matter to deal. The reason why they gave us covered wagons was that grain comes down in covered wagons.

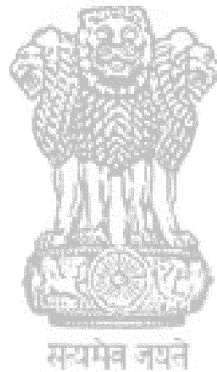
6. Charges on transport of coal from ship.—*(To Mr. Legge.)*—Ships bunker with coal lightered from Baba or Bunker Island. I do not know what the cost of lighters is. We use our own lighters for all our own work.

All that the coal from Baba Island pays to us is 6 annas a ton on import: when it is put into bunkers no further charge is made.

10. **Stacking accommodation.**—There are only four firms dealing with imports of coal in Karachi.

12. **Oil fuel.**—We have kept no record of oil burning ships but I can have the figures taken out for the last three years. The North Western Railway are big importers of oil, so it cannot be assumed that the oil imports are an index to the amount of oil bunkered: they have big tanks of their own here.

We have a shipment of about 6,000 tons every quarter. We last bought West Hartley coal: the price was Rs. 21-4-5 including import duty. My letter of November 20th, 1925, referred to this West Hartley coal. Since then we have had another shipment. Exchange favours this coal. Our suction dredger will not work on Indian coal and during the war when no other was obtainable it had to close down because we could not get English coal. We have simply gone on price as regards our other requirements and if Indian is more expensive we do not look at it. If quality were improved and a guarantee given we should be prepared to give Indian coal a trial. The difficulty has always been the uncertainty of quality.



T. H. E. COAD, Esq., M.I.C.E., Chief Engineer, Port Trust, Karachi.*(Oral evidence—February 9th, 1925.)*

The amount of coal taken for use by the Port Trust varies enormously: you may put it in the region of 18,000 to 10,000 tons per annum but it depends whether the suction dredger which uses 150 to 200 tons a week is working or not. We are the biggest consumers in Karachi, excluding the bunkering firms.

Comparative merits.—We are buying no Indian coal. I do not say that this is altogether because the quality has been bad. You see, we had it during the war and it was often rubbish: and now the railway freights would kill this trade to Karachi. The coal fields are so far away that any system of inspection by our representatives is impossible, and we have to take anything that the collieries give us. There is no doubt that during the war they gave us cargoes of slate. Since the war we have had no Bengal coal: we advertise for it but it is not offered at such good rates as other coals.*

We are just finishing a Transvaal coal contract. We found it, like all coals, irregular. As a rule it gave good results but the last consignment contained a bad patch; it is, I suppose, common to all coals that sometimes you get roof coal mixed up with that from the good part of the seam. It was Witbank coal. We had no trouble with it as regards spontaneous combustion. We do not keep it long enough: for we buy it in small units, a shipload at a time. We buy not direct from the mines but through contractors, like Eduljee Dinshaw and Cowasjee.

Bengal firms tender in reply to our advertisements: I do not know whether the collieries do. The storekeeper gets the actual replies, on which he analyses the figures and puts them up to me to see how the consignments offered would compare. If the figures run fairly close I should always vote for English coal because it gives better value. My comparative figures are rough and are based generally on the Superintendent's figures for the values of the different coals. I do not aim at more than approximations to the calorific value but with these as a basis we compare the prices of coals tendered.

South African coal at the same price gives better value than Bengal. They may be able to give us from Bengal as good a coal as South African, but will they?

Certainly if there were a definite reliable guarantee and a certificate for Bengal coal offered, I should be prepared to give a trial to Indian coal, if the price were all right. One point about the use of Indian coal in Karachi is that we should not have an opportunity of testing the guarantee. If, to meet this objection, a system were introduced of inspection by the Chief Mining Engineer at the colliery and the docks, it should meet requirements.

The reason why we do not take Bengal coal is simple: it is that the rates as compared with the calorific values have not been good enough.

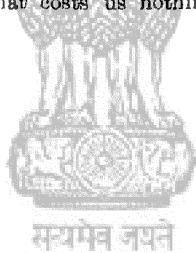
Loss of weight.—We used to have rail borne coal here regularly before the war. Undoubtedly there was a certain amount of loss by pilferage. A point on which we should like information would be what guarantee Calcutta can give as to quantities shipped. The ordinary arrangement is one by which the consignor guarantees the quantity in the hold: it can be based either on weight or on ship surveyor's certificates. We do not weigh the coal that we receive: all we can do is to go on board and make a rough check by seeing if the holds are full. We take consignor's figures. However my impression is that English figures as to weights are more reliable than Indian, and South African also, for, I think, they have Government inspection of loading there and so may be considered reliable.

* Details of recent tenders were subsequently furnished to the Committee: they are printed as an Annexure to Mr. Coad's evidence.

(To Mr. Legge.)—There is no chance of coal intended for us being mixed with other coals. It is landed not on Baba Island, which is the depot of the local dealers, but on Bunker Island, or rather a certain proportion of it is and the rest to five stacks on the main land,—the hydraulic station and west wharf. We supply our own lighters and the storekeeper decides where the contents of each hold shall go.

The only trouble with this system is that a lighter may go to the wrong place. I have found shortages in different places. With the last consignment I measured all the coal and I found the total quantity to be right but the distribution to be wrong. I am confident that there is no danger of our getting a wrong opinion of a coal because another coal had been mixed with it: not only is it landed on our own property and in our own lighters but we have our own staff to look after it. The system which I have now introduced will, I think, prove to a nicety, within a few days of a consignments having been landed, whether the shipper's weight has been correct or not.

Under this system I do not have the coal weighed: but I weigh up and measure three large wagons of it, get the cubic capacity and tonnage, and thus, having measured all the stacks, get the total weight. Last time the figure on the three wagons was 41'9 cubic feet, while the actual figure, as found by comparing the stacks and the tonnage was 41'3. In the past, when we did not measure the whole cargo, there seemed sometimes to be very heavy shortage, but I think this was due to bad distribution. The reason why the coal is in the wagons is that it is landed at Keamari and railed round to our west wharf: that costs us nothing under our agreement with the railway.



ANNEXURE.

Stores Department.

A. FOR 6,000 TONS COAL, DECEMBER SHIPMENT.

I.--Tenders from India.

Firm.	Rate per ton.			Variety of coal tendered.
	Rs.	A.	P.	
A	20	8	0	Natal Tendenga Steam Coal.
	19	3	0	Grade A Witbank Steam Coal.
	20	14	0	Bengal, Balmer Lawrie's Joyramdanga and Victoria Steam Coals mixed.
	22	10	0	Bengal, Turner Morrison's Lodna or Sripore.
B	20	10	0	Tendenga Natal Steam quality, landed and stacked at stacking areas.
	20	2	0	Tendenga Natal Steam c. i. f.
	19	4	0	Witbank district, Transvaal Coal, landed and stacked at the stacking areas.
	18	12	0	Witbank district c. i. f.
	19	10	0	Mitchell Cott's Natal Navigation group Collieries, stacked at the stacking areas.
	19	2	0	Mitchell Cott's Natal c. i. f.
	19	10	0	Bengal, Bird & Co., First Class Jharia Coal 13-14-15 seams, stacked at the stacking areas.
	19	2	0	Bengal, Bird & Co. c. i. f.
C	19	4	0	Durham Navigation Screened Steam Coal.
	28	11	0	For 3,000 tons Hastings' selected class Northumberland screened, shipment in one or two parcels during December.
	29	1	3	For 3,000 tons Horden's Durham's Screened Coal, shipment in one or two parcels December on option.
	29	15	4	3,000 tons Wilson's West South Yorkshire screened hard steam coal, shipment one or two parcels during December on option.
D	24	7	0	Bengal 12, 13 and 15 seams. <i>Earnest money not received.</i>
E	19	12	0	Bengal Bamargarh Colliery.
F	18	8	0	Transvaal or Natal at tenderer's option. From Collieries as per paras. G & C of the specification.

With tenderer's option to give delivery 5,000 tons, 10 per cent. more or less, shipment month of January.

NOTE.—Firms D & E were Bengal firms.

A. FOR 6,000 TONS COAL, DECEMBER SHIPMENT—*contd.**I.—Tenders from India—contd.*

Firm.	Rate per ton.	Variety of coal tendered.
G	29 Shillings.	Grade A. Witbank District Coal, Transvaal Coal Owners' Associations.

II.—Tenders from England through the Consulting Engineers, London.

	<i>s.</i>	<i>d.</i>	
H	28	0	Witbank Coal as per class B of specification.
I	30	0	Natal Coal St. George's Burnside.
J	30	0	Tendegat Natal, Screened English Coal.
K	31	6	Davidson's West Hartley.
	31	2	Bower's West Hartley.
	38	6	South Helton Durham.
L	31	5	Davidson's Cowper Bothel.
M	32	6	Cowdenheath, Lachgelly Glancraig Lassodie.
	30	6	Dysant Main.
	33	6	Lanarkshire large screened.

B. FOR 6,000 TONS COAL, FEBRUARY SHIPMENT.

I.—Tenders from India.

Firm	Rate per ton.	Variety of coal tendered.
	<i>Rs. A. P.</i>	
N	19 0 3	Best Natal Steam Coal or Witbank District Transvaal coal at supplier's option.
	21 12 9	Davidson's West Hartley, Cowper West Hartley, Bothel West Hartley.
	18 8 0	First Class Jharia Coal 13/14/15 seams from Bird & Co.'s Layabad Mudidih Teetulumuri Kattras and Choitodhih Collieries.
		<i>Note.</i> —The Firm quotes for 600 tons, 1 per cent. more or less, and not for 6,000 tons coal as stipulated. This may be our error in typing the tenders.
O	18 11 3 or 28 shillings	Transvaal or Natal, description as B and C of schedule at tenderer's option.
	21 0 9 or <i>s. d.</i> 31 6	
		Colliery screened, first class West Hartley coal as per para. (d) of schedule.
	<i>Rs. A. P.</i>	
P	22 8 0	Hastings' Hartley Steam screened coal.
	26 0 0	Scotch Navigation Prime screened coal.

A. FOR 6,000 TONS COAL, FEBRUARY SHIPMENT—*contd.**I.—Tenders from India—contd.*

Firm.	Rate per ton.	Variety of coal tendered.
	Rs. A. P.	
	28 11 6	3,000 tons, 10 per cent. more or less, in one or two parcels at tenderer's option, of Hastings' selected class Northumberland screened coal.
	26 0 0	3,000 tons, 10 per cent. more or less, in one or two parcels at tenderer's option, of Hastings' selected class Harden Durham screened coal.
Q	21 8 0	Best Bengal Coal from Dharamabad Jambad and Northern Collieries.
R	19 4 0	Best Indian Damagurria 1st Class Admiralty Standard.
	s. d.	
	34 6	Newcastle screened.
	32 6	" unscreened.

II.—Tenders from England through the Consulting Engineers, London.

	s. d.	
S	30 9	Davidson's West Hartley,
	30 6	Bower's West Hartley, Transvaal Coal.
T	28 7½	Witbank Grade A.
	Rs. A. P.	
U	21 8 0	½rd Bhulgora, ½rd Lakube and ½rd Kundy Gusick (Bengal coal).
	s. d.	
	32 6	English Coal Cowper or Davidsons.
	32 3	Bewbeggin.
	33 0	Scotch Coal Lochgelly Cowdenheath.
	32 6	Auchlochan.
	30 3	Wemyss Leuen Dysart Main.
V	32 9	English Rawensworth, Bowers East Hartley, Buddles West Hartley at sellers' option.

Note.—Tenderers U and V made certain reservations on the specifications.